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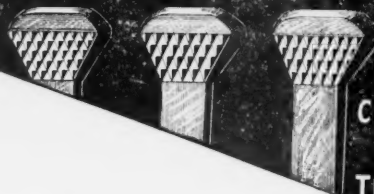
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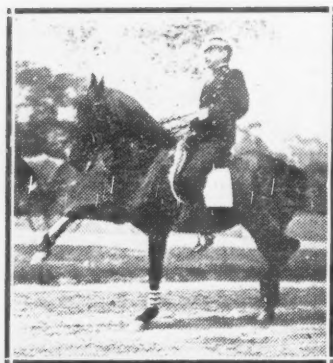
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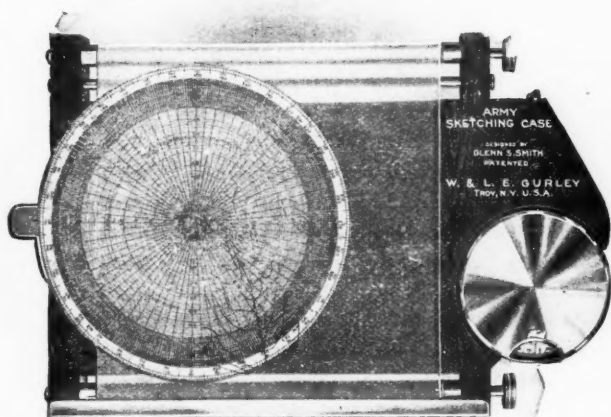
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CONTENTS FOR SEPTEMBER 1912.

THE TRUTH ABOUT CHICKAMAUGA—Captain EDWARD L. ANDERSON	185
CONFORMATION OF THE HORSE—Veterinarian GERALD E. GRIFFIN	207
DAILY DIARY OF EQUITATION WORK AT THE MOUNTED SERVICE SCHOOL.....	218
THE NEW ORGANIZATION OF THE SWISS ARMY.....	222
CAVALRY RAIDS, THEIR VALUE AND HOW MADE—Captain C. R. DAY..	227
THE RELATION OF PROMOTION TO ORGANIZATION—Captain GEO. VAN HORN MOSELEY.....	239
NOTES ON THE NEW RUSSIAN CAVALRY DRILL REGULATIONS—Cap- tain N. K. AVERILL	246
THE NEW CAVALRY EQUIPMENT—Captain EDWARD DAVIS	253
REPRINTS AND TRANSLATIONS:	
CAVALRY IN WAR.....	290
THE IMPORTANCE OF CAVALRY	307
THE CONFEDERATE CAVALRY	323
THE SERVICE OF RECONNAISSANCE WITH SPECIAL REGARD TO DIVISIONAL CAVALRY	331
MILITARY NOTES:	
LONG DISTANCE RIDES OF TWENTY-SEVEN PATROLS, FRENCH ARMY.	339
SABER VS. PISTOL, A SOLUTION—Captain N. K. AVERILL	341
THE ARMY HORSE.....	343
A CAVALRY RESERVE—Major C. D. RHODES	348
BOOK REVIEWS	352
EDITOR'S TABLE	357
PUBLISHER'S NOTICE.....	365

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THE TRUTH ABOUT CHICKAMAUGA.*

BY CAPTAIN EDWARD L. ANDERSON,† FIFTY-SECOND OHIO
VOLUNTEER INFANTRY.

I HAVE had the honor of being invited to address you, this evening, upon a work of great significance; one which will give surprise to those who derive their ideas of the great Battle of Chickamauga from tradition and unsupported statements, but which will be recognized by those who were participants in the engagement as containing much of, if not the whole truth regarding the events of September 19th and 20th, 1863, when the Army of the Cumberland and the Confederates under Bragg measured swords in one of the fiercest contests of modern times.

The author of this work, a son of the late Brigadier General Gracie, Confederate Army, assures us that he undertook the self-imposed task, without much knowledge of his subject and without prejudice, because in his visits to the battlefield, in

*A paper read before the Ohio Commandery of the Military Order of the Loyal Legion of the United States by Captain Anderson who served as Adjutant General of McCook's Brigade during this campaign. As will be seen, it is a review of a late book by Archibald Gracie which has recently appeared under this same title.

†Author of "Modern Horsemanship," "Curb, Snaffle and Spur," "Horses and Riding," etc., etc.

memory of his gallant father, he found so many contradictory statements from misinformed reporters, and such conflicting witnesses in the monuments, that he determined to see how near he could bring into harmony the differing credible representations, by seeking information on every point from both the Federal and Confederate side.

"The tribunal to whose decision the truth * * * is referred, after exhausted and impartial study, is the Official Reports, which constitute the Court of Last Resort, cited in the text herewith, and supplemented by reference to those authoritative sources in 'Notes' following thereafter, which will be found of special interest." (page viii.)

The greater part of the book is given up to discussing the four or five last hours of the engagement, so that in a review of the work in question, we must pass over the battles of the 19th of September and the early part of the 20th, with an account of these events in a brief manner, detailed enough only to make as clear as possible the movements and their results from noon of the second day.

In the hurly-burly of the series of fights which then took place, often by mere groups of our separated and divided commands, where there was much borrowing of squads, regiments and brigades as various points required support at moments of supreme importance, the author of "The Truth About Chancellorsville" met with very great difficulties. Each officer naturally and loyally made the best possible record for his troops in the last stand before the withdrawal from the field, which reports Colonel Gracie assumes were generally intended to be fair and truthful, except in the instances where he pillories the offenders in his criticisms.

One, and not the least of these difficulties in reconciling the conflicting statements into some kind of accord, is the fact that upon nearly every important affair the given time differs, often, by hours.

"I have found another check upon the accuracy of my work. I have followed out the movements of each corps; then the movements of each division of each and every corps; and finally, the movements of every regiment, battalion, and battery of each brigade in every division; and, where the units of organization

have dovetailed perfectly, I have obtained, I think, a mathematical demonstration in many instances of the accuracy of the work. After one has accomplished the chimerical task which I have suggested, he may claim to know something about the truth of this most wonderful battle.

"In consequence of this work of mine, I claim respect for the accuracy of the premises on which my conclusions are based, for the truth of which the Official Reports are responsible, and with which these conclusions square." (page 35.)

To those who thoughtlessly ask, "Why should not the story of the battle, now more or less generally accepted, be permitted to rest, or the whole affair allowed to pass into oblivion?" it should be explained that to juggle with or to suppress historical facts is a crime that has a much wider influence for evil than is thought to prevail by such weaklings.

The first chapter of Gracie's book is given to the "Elimination of False History," and here the author undertakes to prove by the Official Reports that Chickamauga was not fought by Rosecrans for the possession or the holding of the City of Chattanooga, but for the destruction of Bragg's troops and the control of a large region occupied by the Confederates. Such objects were within the rights of an invading army; but as Chattanooga was peacefully taken ten days before September 19th, and was in a favorable position for defense, as was afterwards proved, it was absurd for Rosecrans to assert that the battle was fought for its permanent possession, a theory that came to his mind later when, after admitting defeat, he claimed that the object of his campaign was attained, and that Chickamauga was a great Federal Victory.

The fact is that Rosecrans by a series of masterly movements had forced the Confederates to withdraw from Chattanooga, and that after this was accomplished he lost his skill, and deceived by Bragg's clever stratagems believed that the Confederate forces were flying before him, a disorganized rabble seeking safety in flight.

Rosecrans' eyes were opened on September 12th, when he was confident that Bragg's army was concentrated about Lafayette, an easy march from the captured city. Then he hurriedly

brought his weary and scattered corps into the unknown recesses of a tangled forest to face a brave and prepared foe.

"I doubt if there can be found recorded anywhere in the history of a great battle, an instance where any army was more completely deceived than was the Federal army by the stratagems employed by General Bragg during the four days ending September 12th." (Gracie page 20.)

For four days the opportunity was given Bragg of attacking one of Rosecrans' corps with a much superior force, before it could receive aid from either of the others, and the neglect of doing so is one of those mysteries that envelope the story of Chickamauga; another, no less important in its bearing, is Longstreet calling a halt on the evening of September 20th, when the retreating forces of Thomas, lying at his mercy, were permitted to withdraw undisturbed. Of course it will be said, in accord with Granger's afterthought, that Bragg's army had suffered great losses in the battle of two days; but no successful troops would have refused to march a few miles, no matter what losses had been sustained, if they saw a complete victory before them.

Upon the 18th of September Col. Dan McCook was ordered with his brigade and the 69th Ohio, to make a reconnaissance towards Reed's bridge, on the Chickamauga River, at the northeast corner of what afterwards proved to be the battlefield, and that he should destroy that structure should he be able to do so without bringing on a general engagement. Col. McCook's command arrived at dark within a mile of the bridge, when his skirmishers came upon the rear of McNair's brigade, of Bushrod Johnson's Division, which was passing along a road crossing his front. About twenty stragglers were picked up, without creating any disturbance, and after, a short time of quiet, the 69th Ohio was sent forward and succeeded in firing the bridge, which as it was afterwards proved was only scorched. At daylight on September 19th, the enemy opened with small arms and artillery upon McCook's men who had passed the night lying upon their arms, without fires, upon which Colonel McCook, following his previous orders, and, a peremptory order having been received before any great losses on his part, marched his command back toward Rossville. Upon reaching the point where the head of his command struck the Lafayette Road, General Brannan was

met (Croxtan's brigade in advance), in column without advance guards. McCook called out to Brannan that he had a rebel brigade penned up in a bend of the river near Jay's sawmill, with the bridge in its rear destroyed. General Thomas reports that McCook gave him the same information at Baird's headquarters.

Immediately upon the receipt of Colonel McCook's report General Thomas sent Brannan, followed by Baird, eastwardly towards Reed's bridge and the neighboring sawmill with a view to capturing the brigade which was penned up in the bend of the Chickamauga River. This episode is described at some length on account of the very important events which followed it as a matter of course. The fact was that the enemy was in great force about the points mentioned and towards Alexander's Bridge. The divisions of Brannan and Baird were soon hotly engaged and the battle of the 19th of September was begun past recall. Besides the divisions of Brannan and Reynolds, General Thomas had those of Johnson, Palmer, Van Cleve and Davis, long before midday. Croxtan of Brannan's division and Van-Derveer of Baird's, after a number of short contests, had pushed their way to within a half a mile of Jay's sawmill. Baird and Brannan maintained the unequal fight for at least two hours when Johnson, Palmer and Reynolds came to their assistance. All day the battle raged with varying fortunes; sometimes in long lines, sometimes by small commands, until before night every division in the Army of the Cumberland was represented on the fighting front. At dark Johnson's division alone remained in advance at D. C. Reed's farm where it was fiercely attacked and for a time the line gave way, but rallied and held its ground after great losses, until the firing ceased; when it, with other divisions took positions in a line west of the ground fought over and the battle of September 19th ceased.

As has been stated, in a review of the book in question, we are not concerned about the battles of the 19th of September and the first half of the 20th, further than to give us an understandable perspective of the whole field for both days. Nor are there many points of importance in dispute before the arrival of Granger's Reserve Corps and the withdrawal of the whole of Thomas' command to Rossville.

From about noon of Saturday up to eleven o'clock on Sunday, Rosecrans' headquarters were at the Widow Glenn's house on the Crawfish Springs Road. Here late on the night of the 19th the Commander of the Army of the Cumberland had a consultation with his Corps Commanders regarding the arrangements of the lines for the next day. With some slight changes the plan was adhered to with the following result:

Sheridan's division (20 A. C.) was posted on the extreme right at Widow Glenn's. Davis (20 A. C.) was placed on Sheridan's left, his line extending to the south-east corner of Dyer's Field. Wood (21 A. C.) was on Davis' left, and Brannan's (14 A. C.) division on the left of Wood reached the Lafayette Road, north of the Poe house. Van Cleve's division was in rear of Wood and Brannan. There was a break in the line, as Reynold's right was in echelon four hundred yards in front of Brannan's left. Reynolds (14 A. C.) Palmer (21 A. C.) Johnson (20 A. C.) and Baird (14 A.C.) had their divisions in that order around and east of Kelly's field. The brigade of John Beatty was on Baird's left, Stanley's behind Baird, Sirwell's with the reserve artillery in rear of the left wing, these last named three being of Negley's division; this force being intended to guard the Lafayette Road from Bragg's formidable masses on his right. Granger, with Steedman's division and Dan McCook's brigade of the Reserve Corps, was posted at McAfee's Church, about four miles from Thomas' left to watch the road from Ringgold, and to give aid to, or to receive aid from the main army as occasion might demand.

The battle of September 20th opened by an attack upon our extreme left against John Beatty's thin line, which was driven back upon Baird's troops and this attack was repulsed. Stanley and the reserves of Johnson and Palmer drove back two Confederate brigades which had passed along the west side of the Lafayette Road in an effort to reach the Federal rear. Baird, Johnson, Palmer and Reynolds and Negley's two brigades repulsed many fierce assaults with steadiness and determination. The right wing of a Confederate brigade, its left held in check, slipped by to Kelly's field, when it was met and routed by Van Derveer and Willich, who always seemed to be on hand when wanted.

The greater part of Thomas' left wing was somewhat protected by a rude barricade of logs and rails, which aided the troops in resisting the terrible fire of the enemy. This slight but encouraging defence originated with Hazen, who throughout the whole day exhibited such skill, courage and perseverance as marked him as one of the most efficient officers in the army. Previously to the withdrawal of Wood from the main line Brannan was fiercely attacked in Poe's Field, but the enemy was driven from his front by an enfilading fire from the divisions of Reynolds and Palmer.

We now come to a very important phase of the battle, one that threatened the early defeat and destruction of the whole Army of the Cumberland.

About eleven o'clock Wood's division was withdrawing, under misunderstood orders, to assist Reynolds, who was on Brannan's left where there was the break in the line as described. Before Wood had wholly passed from his position two divisions of the enemy broke through the gap; one of these passing northwardly, crumpled up Brannan's division and all the troops in its rear; the other body of the enemy driving the troops of Davis, Sheridan and Wilder in a wild rout that bore with them from the field the Generals Rosecrans, McCook and Crittenden. The gallant Harker having escaped this attack returned with his brigade and for a time faced fearful odds, but very shortly these ready fighters with Brannan's men and those of Buell and Sam Beatty, a scattered mass, were pursued until a stand could be made by Brannan, Harker and fragments of other commands upon the heights south of the Snodgrass house.

General Thomas had nothing to do with posting the first line upon Horseshoe Ridge, as is proved by the official report and the statements of all concerned. When Brannan, Wood and the commands in their rear were driven north from the vicinity of the Poe house and Dyer's field, Brannan's troops reformed upon the westerly point of the Horseshoe Ridge, while Wood posted Harker's brigade upon the easterly hill, in continuation of that providentially discovered stronghold; while Stoughton found refuge between Harker and Brannan, and the 58th Indiana was placed between Connell's 82nd Indiana and Croxton. The 21st Ohio, a splendid regiment of Sirwell's brigade with 535 men

armed for the most part with Colt's repeating rifles, afterwards joined the right of Connell. When General Thomas arrived at the Horseshoe Ridge, from one to two o'clock, the line was as follows: 21st Ohio; 82nd Indiana; 17th Kentucky; 58th Indiana, Croxton, under Hays; 13th Ohio, Stoughton; 44th Indiana, Harker.

We now employ literally Colonel Gracie's words: "Our standard of truth, from which we quote, plainly indicates that Thomas was the grandest figure of the Federal Army; a monument of strength and inspiration to the courage of his soldiers, who had rallied in the woods and on heights to which they had fled, and where they had been posted under the orders of their commanders, Generals Wood, Brannan and John Beatty, and Colonels Harker, Stoughton, Hunter and Walker."

"Here, from one to one and a half hours, with a force of about 1500 fragments under Brannan and of at least 1200 (carefully estimated) of the Iron Brigade of Harker, including the 125th Ohio, 'Opdycke's Tigers,' and Smith's four guns and eighty-three men of the 4th United States Battery. whilom fugitives most of them whose courage was restored by the very presence of Thomas, the pursuit was checked and the heights maintained against that most formidable instrument of war, Kershaw's South Carolina Brigade, fresh from storming the heights off Gettysburg, and from victories on many hard fought fields, but none, according to their commander, more heavy than this. Kershaw's Brigade about 1200 in action, with Colonel Oates 15th Alabama Regiment, were the sole representatives that afternoon of 'Longstreet's Virginia Army,' in the assault on Chickamauga Heights; yet these men, on the strength of their reputation, inspired such terror that their numbers were more than quadrupled by the imagination of their opponents. About 2 o'clock P. M., to Kershaw's support on his left came Anderson's strong and brave Mississippi Brigade, of Hindman's Division; but still the heights were held, the 21st Ohio Regiment, the strongest in the Federal Army, performing yeoman service at this juncture with its efficient use of its five-chambered Colt's revolving rifles.

"Then followed the belated Bushrod Johnson, whose time

and energies had been wasted for hours waiting for orders to advance his much enduring, hard-fighting Tennesseans.

"This is the crucial moment and the die is cast. The 21st Ohio's thin line at its middle has been thrown back like a gate on its hinges, in a vain attempt to finally resist the Confederate movement on Brannan's flank. But fifteen minutes more and this rally on the heights would have been of no use, and Thomas' superb courage, famed in story, might never have been a theme of grandeur. Grangers' Reserve Corps, without orders, marching *au canon, a la Desaix a Marengo*, had arrived on the field.

"After reporting to General Thomas, General Steedman, of this corps, was ordered to move his division into the three-quarter-mile gap between the two wings of the army. The Preparatory movement had been made, but before the final command of execution was given, the more immediate danger was seen in time. On the command 'right-face' Steedman marched west in rear of Brannan's line until the latter's right was reached, when first Whitaker's Brigade and then Mitchell's were moved by the left flank. The division then charged up the heights, General Steedman performing the most conspicuous act of personal courage recorded of any general officer on the Federal side, leading his men, most of them raw recruits, then for the first time in action, and, seizing the flag of the 115th Illinois, gained the crest and drove the Confederates down the southern slope of Missionary Ridge.

"About the time that Steedman's Division was thus put into action, another strong brigade of well-seasoned troops, under the command of a Mexican War Veteran, Colonel Van Derveer, reported to General Thomas at the Snodgrass House, and were immediately placed in the front in one line on the crest, relieving Brannan's troops (then almost exhausted), and posted next to the 21st Ohio's left, which still defended this flank on Horseshoe Ridge.

"By this acquisition of 4112 fresh troops under Steedman and about 1200 under Van Derveer, who had already rendered most creditable and opportune service on the Federal left wing and rear, Thomas was now strong in numbers and his whole command well supplied with ammunition; for another great service rendered by Steedman was the bringing up of ninety-five

thousand extra rounds of ammunition to be distributed among Brannan's and Harker's men, whose supply was nearly exhausted."

"The aspect of affairs on the heights was now completely changed, and the exultant Federals, who had been a few minutes before fighting in desperation, were reinforced with strength and courage like men who had won a victory. It was now that General Thomas resolved to hold his position and the army on the field until nightfall. He made his preparations for the purpose by general distribution of ammunition among both wings of his army. The Confederate division commanders on the left wing had received forcible knowledge of the material change in conditions by the arrival of reinforcements in support of the hitherto hard-pressed Federals on the heights. They now got together for the first time. Hindman and Johnson joined the brigades of their divisions with Kershaw's Brigade for two successive assaults in desperate efforts to gain the heights; for up to this time distinctly noticeable is the lack of unity of action on the part of these Confederate generals, due to the absence of any orders whatever from their wing commander, General Longstreet, and their inability to find him on this part of the field. Nay, more, questions of rank and precedence arose between them, which only General Longstreet's presence could have settled, and from 12 o'clock until now they had pulled in opposite directions.

"Nothing could exceed the intensity and desperation of the successive assaults which now followed, made by these seven Confederate brigades in line. Hindman mentions the fact that on his 'extreme left the bayonet was used, and men were also killed and wounded with clubbed muskets,' while Kershaw on the right effected a momentary lodgment near the crest, which drove the Federal from the summit; but the latter rallying all their available men, charged upon the South Carolinians whose colors were only saved by their bearer, who, after receiving a mortal wound, turned and threw the staff backwards over the works into the hands of his comrades.

"It was up to this time that Thomas, by virtue of his rank, used his discretion and held his men on the heights, by the example which he set them and the love which they bore towards

him. His antagonist, Longstreet, who for the most part of his time until now had stationed himself in the woods in the rear of his right division, Stewart's, at this juncture, first emerged therefrom in time to witness from Dyer's field the last desperate assault of Kersaw. Preston's division had at last been 'pulled away from its mooring on the river bank' and had been advanced, with his leading brigade in line facing north, bisected by the Lafayette Road, near the Poe house, with his other two brigades immediately in rear, also in line. Longstreet now got into the action in Dyer's field with his last division, Preston's, the strongest of all, which he had held in reserve. He still remained blind to the opportunity which had existed at noon and all afternoon, plainly evident to the Federal Generals, Wood, Thomas, Hazen and others. Why was it that he did not order the whole of Preston's Division directly forward along the Lafayette road, with Buckner's Reserve Artillery and the latter's other divisions, so as to fill the apparent gap of one-half to three-quarters of a mile between the Federal wings?

"There was in the same fringe of woods west of the Lafayette road, at this point, four other Confederate brigades, none of which had moved since noontime. Humphrey's Mississippi Brigade, formerly Barksdale's, which, under orders of the wing commander, was anchored at the 'Blacksmith Shop' and made no assault in the battle, the men begging in vain to join their comrades in the charge; then there were the Texas Brigade of General Robertson, Law's Alabama Brigade, under Colonel Sheffield, and the Georgia Brigade under General Benning, all three under the command of General Law, comprising a part of Hood's famous division, then located 'in line perpendicular to the road, to the left and slightly in advance of Preston and close to the burned house (Poe's).' Blind to his opportunity and ignorant of the weakest point in his adversary's line which appears to have been a continued source of anxiety to General Thomas that afternoon, General Longstreet ordered only two brigades of Preston's to Dyer's field, leaving the other third of the division, Trigg's brigade, at Brotherton's, for protection against the enemy's cavalry, supposed to be crossing the Chickamauga below Lee and Gordon's Mills, whom Trigg with two of his regiments 'was sent 1½ miles back to intercept,' on a

perfectly useless reconnaissance, wasting valuable time and energy only to discover that the alleged enemy was 'their own' Confederate General Wheeler's men. Gracie's and Kelly's brigades were then ordered forward to the relief of Kershaw and Anderson in a final and successful effort to gain the Heights of Chickamauga, and drive the enemy from his chosen stronghold which was made the 'keypoint' of the battle, first by the division commanders who followed the fugitives into the woods and mountains fastness and finally by the action of Longstreet himself.

"The assault of Gracie and Kelly had begun, preceded by 'a deadly fire on the right and right rear of the forces in front of Stewart.' The movement of this artillery, principally composed of the twenty-four guns of the Reserve Corps Artillery, and commanded by Major Samuel C. Williams, was in General Buckner's special charge under General Longstreet's orders, but it was not until Gracie had gained the heights that Longstreet ordered Buckner's advance northward, with a battery of twelve guns with Stewart's Division following, Longstreet's object being not to drive this entering wedge between the two wings, so much as an effort to prevent the Federal left wing from reinforcing that part of their army which was posted on Horseshoe Ridge. Had Longstreet's orders to accomplish his object been given more promptly and more effectually executed, the reinforcement of Hazen's Brigade would not so opportunely have arrived in support of Harker and Brannan, nor General Hazen been rewarded with a major-generalship's commission for his act, which saved both Harker and Brannan from capture or annihilation. But it was long before this that General Thomas' watchful eye and attentive ear, of the trained soldier, forewarned him of the approaching storm and the danger to what he knew to be the weakest point in his army's position. It was also at this juncture, about 4:30 P. M., not later, that he received the withdrawal order from General Rosecrans.

"Heretofore, by reason of his being the ranking general on the field of battle, in the absence of any order from the commander-in-chief, Thomas had, in accordance with his resolve, used his power of discretion and maintained Harker's and Brannan's fugitive fragments at their position on the Horseshoe, as-

sisted by the 21st Ohio, generously loaned Brannan on his urgent request to General Negley, and had saved these men on the heights and the whole army from immediate destruction, until Steedman's and Van Derveer's arrival.

"Another crises now ensues. At the actual and relative time of Gracie's advance in magnificent array, as recognized in the Official Reports of Federal officers on the Horseshoe and described with much admiration personally to the writer by some of them (General Boynton included among the number), General Thomas now received Rosecrans' first dispatch, directed to himself, ordering withdrawal, and as proven by thirty of our witnesses against the testimony of only one to the contrary, the evidence in fact being unanimous on the subject, General Thomas did not and could not delay one moment his obedience to the order, and forthwith dispatched his aid, Captain Barker, for Reynolds to make a beginning of the movement. Orders were also dispatched to the other left wing division commanders for their withdrawal successively. This was a wise move, to begin the withdrawal at this quarter, because of more precarious situation on his left wing, which at this juncture was within a few hundred yards of being completely enveloped by the Confederate lines.

"Thomas left the Snodgrass house before Gracie took possession of the heights, leaving General Granger the only corps commander on the battlefield, and by virtue of his rank, in command of the troops under Harker and Brannan, as well as his own men under Steedman; but Granger's personal departure seems to have been timed by the very first indications of Confederate success in driving Harker from the heights. Thus General Thomas 'quit when orderd and because he was ordered.' Meanwhile the withdrawal of Reynolds had already begun before Barker's arrival with the order. General Reynolds is quoted as saying, in his position at the breastworks that his only alternative was surrender. When his division reached the Lafayette road, General Thomas saw him. Putting himself at the head of Reynold's Division, General Thomas led his army in the movement of withdrawal.

"As before mentioned, the Confederates had nearly enveloped the Federal left wing; the front brigade of a division of

the right wing had reached the vicinity of the Kelly house, passing in rear of the Federal divisions of Baird and Johnson. Thomas himself ordered the charge and the division cut its way out. At the same time the way was made clear for the escape of the other divisions of the Federal left wing, most of whom were retired in great disorder.

"Reynolds, misunderstanding Thomas' order, moved straight along the Lafayette road toward the Rossville Gap, not halting with his section of the division until checked at Cloud Church by Forrest's cavalry, while Thomas separating E. A. King's Brigade from the rest of the division, wheeled to the left near McDonald's house and reached a point of safety on the Ridge road at the head of McFarland's Gap. Here he halted and sent his orders for the withdrawal of the rest of the army, which he had left on Chickamauga Heights, and which had been driven therefrom before his order arrived. He thus obeyed to the letter General Rosecrans' orders to withdraw. The most direct route of withdrawal to Rossville was by way of the Lafayette road and Rossville Gap but, in accordance with the wording of Rosecrans' order, he moved toward McFarland's Gap to 'join his army with Crittenden and McCook,' whose forces were then known to him to have been in that neighborhood. Finally, the full letter of obedience to Rosecrans' order was followed when he 'assumed a threatening attitude' by the formation of his line to resist pursuit and protect the withdrawal. This alignment extended from the head of McFarland's Gap to the Lafayette road and Cloud House, nearly to Rossville Gap. This alignment was completed about 5:30 P. M., and shortly thereafter General Rosecrans' second dispatch, sent through the medium of General Garfield, again ordered him to retire on Rossville, provided his troops were 'retiring in good order'. General Granger was present with Thomas, and here learned for the first time Rosecrans' command to retreat to Rossville." (Page 145, Gracie.)

Colonel Gracie adds, "It was also in the vicinity of the Cloud House that General Sheridan at 5:30 P. M. reported his arrival at Thomas' left, * * * He had received a terrible beating at noontime on the extreme right flank of the army, suffering a loss of over 30 per cent., yet he gathered and rallied

in the woods more than half the scattered remnants and brought them into line again at the extreme left flank of the army, ready before sun down to go into action again. Sheridan's statement is that when he reported to General Thomas for action the latter replied that his lines were too disorganized and withdrawal was necessary." There is no shadow of doubt that Sheridan marched to Rossville after the debacle of the morning, and obeying an order sent by Rosecrans from Chattanooga at 5 P. M., he followed his original intention of moving out upon the Lafayette road, reaching a point three miles distant, where he halted on finding that it was too late to render assistance. Colonel Gracie states further that General Thomas, directed Sheridan, that; "instead of advancing further 'the 1500 gathered' should be reformed on the Lafayette road at Cloud house and aid in covering the withdrawal to Rossville." (Page 110, Gracie.) General Davis joined Thomas' right by way of McFarland's Gap; too late, however, to take part in the engagement.

In no part of his history does Colonel Gracie neglect to defend those who he thinks have been unappreciated or unfairly criticised, nor does he permit those whom he believes to have been negligent of their responsibility to escape his reproof. He declares that Negley's withdrawal of the two small regiments left him, in charge of the artillery reserve, was timely and judicious, for the guns might be, and probably would have been employed by the enemy against our retreating columns; that whole regiments were lost or imperilled by officers who employed them to cover the retreat of their own commands; that many of those who were doing their whole duty in a courageous and faithful mannner were censured and maligned; and all this without fear or favor. His readers must judge from the authorities he quotes, how impartial he has been in discussing a vast number of vexed questions, which up to this time have not been solved.

About an hour after Granger had left McAfee's Church to aid General Thomas with Steedman's brigade, Colonel Dan McCook, who was during the two days under the direct command of Granger and Thomas, and whose every movement met with the commendation of both, was ordered to report to Granger via the Lafayette road. As the brigade was about to pass the

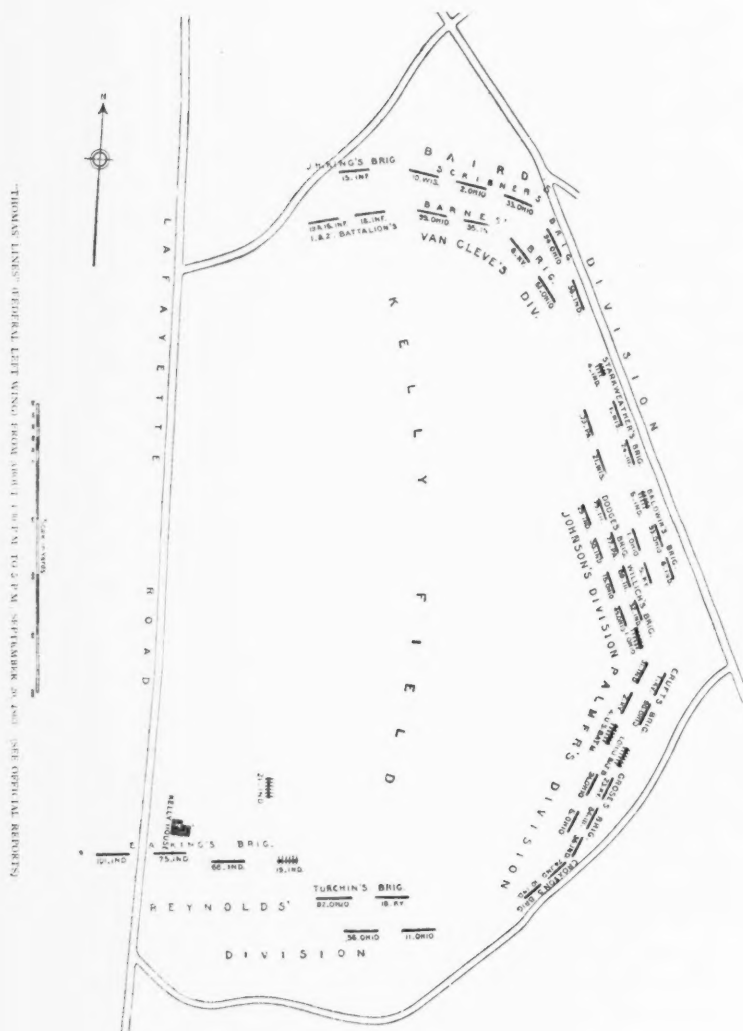
McDonald House, Colonel McCook ordered Captain Edward L. Anderson, his adjutant, to hasten forward to announce the approach of the command. Driven from the road by the fire of small arms and artillery Anderson turned to the right into the fields near McDonald's. Here he was met by Major Joseph Fullerton, of Granger's staff, waiting for McCook. At this moment the brigade, which had been marching by the right flank without an advance guard, was driven from the road by the artillery of the enemy to the heights behind the McDonald House. Fullerton waited to see where McCook would take position, while Anderson galloped forward and found General Thomas under a large tree near the Snodgrass house. General Thomas was perfectly calm, but Granger advancing from near by was weeping for the death of his Adjutant Russell, who had been killed but a few moments before in stationing Steedman's troops. This was about 2 P. M. Fullerton then arrived, and reported to Thomas that McCook's brigade, which he had noted from some distance, was posted on the crest of the ridge, apparently in perfect order. General Thomas remarked that "it was a happy chance, for McCook was just where he wanted him to protect our left flank and rear" and directed Captain Anderson to go to McCook with orders to remain where he was and hold the position. The wisdom of this decision was shown later in a remarkable manner, for it proved the rescue of the army, as will afterwards appear, and McCook's brigade, by offering a threatening front in a commanding position and by use of its battery, performed greater service than it did even in the glorious Atlanta Campaign, when out of a brigade averaging about two thousand men it lost, at Kenesaw, Peachtree Creek, Jonesboro, and in many smaller engagements, three commanders and 1,089 good soldiers, killed or wounded. No officer, staff, or other, placed McCook upon the crest of Cloud Hill, as every member of the command well knew. His troops were simply driven from the road, and under the Colonel's hurried orders sought the crest of the hill which so timely and unexpectedly offered itself; the movement was unpremeditated, unforeseen affair, that was as quickly begun as the report of the first gun sounded, and the men answered as readily, but in an orderly manner.

Rosecrans' dispatch directing Thomas to withdraw the army, and form a defensive line with Crittenden and McCook whom the Commander-in-Chief supposed to be somewhere in Thomas' rear, was sent from Chattanooga at 4:15 P. M., and was received before 5 o'clock as we knew from actual and constructive time. General Thomas immediately repaired to Kelly's field to hasten the movement. But a singular state of affairs had taken place in the left wing before Thomas' arrival. For some hours previously no word had been received from Thomas, and a consultation had taken place between the four division commanders and other officers of rank regarding the condition of their commands. This is not described in Gracie's book, but it is too important to pass over.

"There had been no intimation to the four commanders on the left—Baird, Johnson, Palmer and Reynolds—that everything had not gone well with the right. They could get no message from Thomas for two or three hours. At this juncture, fearing another assault by the Confederates, and supposing that Thomas had been cut off from them, Palmer, Johnson and Reynolds consulted with Baird and proposed that Palmer, as senior ranking officer, be placed in command of their four divisions and march them off the field. But Baird refused to join them, preventing this calamity." (*Chattanooga Campaign*, Col. M. H. Fitch, Bairds' Inspector General, Page 111.)

"About this time it was quiet on our front, and quite a number of general officers were congregated discussing the condition of the fight, among them two Major Generals, Reynolds and Palmer; and it was urged that we ought to have a general commander for our four divisions. Reynolds, the senior declined positively to assume it, remarking that it would be only assuming a disaster which was certainly impending." (*A Military Narrative*, by General W. H. Hazen, page 131.)

"The commander of one of the divisions near my own, approached me and said I was the ranking officer on the field, and that I ought to order a retreat of the divisions on the left to Chattanooga. At the moment the prospect did appear gloomy, and I was inclined to apprehend that matters were as bad as he supposed them to be. I told him, however, that if it was true that the rebels had defeated our right and center of the army,



and captured or killed Rosecrans, Thomas, McCook and Crittenden, so far as I was concerned they might have every man of the four divisions they could take; that we would cut our way to Chattanooga; that I would rather be killed, and be d——d, than to be d——d by the country for leaving a battlefield under such circumstances.' Personal Recollections of General John M. Palmer, pages 183-184.

Shortly after this consultation Hazen was given permission to take his brigade to look for the right wing. About 5 o'clock he came upon Harker's "hard pressed brigade," on the open crest about the Snodgrass House, a few hundred yards in rear of his original position on the east hill of Horseshoe Ridge, whence he had been driven about 5 o'clock by General Archibald Gracie who had gallantly taken possession of the long sought point of advantage. Hazen who had skirmished over from Kelly's field with a front of two regiments, together with Harker and a section of the 18th Ohio Battery checked the enemy's pursuit. Here Opdycke, "the bravest of the brave" was conspicuous in his gallantry and his regiment, the 125 Ohio and the section of the 18th Ohio Battery, formed the last fighting line. Steedman had fallen back from the main ridge, with Bushrod Johnson between him and the Horseshoe. Brannan exposed on both flanks, was the last to leave the crest, retiring in rear of Snodgrass House; and by 6 o'clock the enemy had full possession of the stronghold so faithfully defended.

That is to say, the whole of Horseshoe Ridge was in possession of the brigades of Trigg, Kelly and Gracie, the only Federals remaining being the three captured regiments, 89th Ohio, 21st Ohio, and 22d Michigan, and a temporary stand of the 9th Indiana, which Gracie alleges had been sent to take possession of the middle hill, and that Brannan did this to distract the attention of the enemy, as was his abandonment of the captured regiments, to cover the "stealthy" withdrawal of his troops.

When about 4:30 p. m., General Thomas reached the southern edge of Kelly's field he found Reynolds already moving off in column of fours, while beyond him a compact body of the enemy was passing south towards the rear of Baird, Johnson and Palmer. General Thomas at once commanded Reynolds to form line, face to the rear, and charge on the advancing foe.

Turchin now made the charge which should live in history, as with wild cheers his brigade fell upon the Confederates and drove them more than a mile, uncovering the other three divisions. Barnett's Battery, of Dan McCook's brigade, aided Turchin in this attack and covered his retreat, when Reynolds and his troops found "shelter" behind McCook's brigade. Here were also the brigades of Robinson and Willich, and with these three commands General Thomas formed the nucleus of that front upon the line of hills that permitted the remainder of the army to withdraw by way of the 'Ridge Road,' to McFarland's Gap and Rossville.

Had McCook's brigade not been interrupted in its march to the front by an enemy which drove it to "the commanding position" south of the Cloud House; who can say what would have been the fate of the Army of the Cumberland? Had Turchin failed to return, the Confederates would have crushed the left wing in flank and poured masses in rear of the gallant men who had held the Horseshoe Ridge. Colonel Gracie remarks (page 114), "It can not be doubted that this position occupied by McCook's Brigade and Barnett's Battery was developed into one of the most important keys to the safety of the whole Federal Army, holding in check cavalry, infantry and artillery forces of the Confederate right. For on the Confederate right Forrest's Cavalry and troops of Breckenridge's and Liddell's Divisions overlapped the Federal left under Baird. Steedman's opportune arrival had pushed aside Forrest's dismounted cavalry, thus preventing the junction via McFarland's Gap and the two Confederate wings; and nothing but McCooks' Brigade and Barnett's Battery remained behind after Steedman to guard this threatened catastrophe—the surrounding of the Federal Army and blocking its withdrawal through the passes to Rossville." For these services the brigade was handsomely commended by General Thomas.

"They also serve who only stand and wait."

A few more words about the withdrawal of the troops from the field. It has been officially reported that no command except the brigade of Colonel Cruft had the good fortune to leave Kelly's field in perfect order. Johnson was fighting at the time the order came, but his right was exposed and he had to obey,

and reports that he owed the safety of his command to Willich's masterly movements; Baird's division which had borne much of the burden of the two days, owing to its exposed position on the extreme left of the line, again suffered severely in killed, wounded and prisoners; one of Grose's regimental officers on the left reported that his command had been crushed, so that Grose Palmer and Thomas were forced to recognize that Grose retired in "some confusion," when we know from the reports that the 36th Indiana and 6th Ohio withdrew in line of battle and turned to fight (as many of the men have told the writer); but Cruft goes down in history through his various superiors as having withdrawn in perfect order. It is evident from his report that Cruft, seeing Reynold's retreat, left the line before the last attack, which scattered Grose's left, and he therefore had a mere parade in reaching the shelter of the woods. (O. R. 50, page 733.) There was more or less confusion in all the other divisions after Reynolds withdrew.

After the troops from Kelly's field were on the road to McFarland's Gap, the heroes of the Horseshoe Ridge were safely withdrawn, except three regiments, (21st and 89th Ohio and 22nd Michigan) which were not notified to retreat and were captured, and the 9th Indiana narrowly escaped when it was ordered to make a vain endeavor to regain Hill No. 2. (the middle one); and the last shots fired at Chickamauga were between Lieutenant Colonel Henry V. N. Boynton's 35th Ohio and the 6th Florida. Henry V. N. Boynton was a gallant and efficient officer, a medal of honor man, one who distinguished himself on many fields.

Hazen followed the troops through McFarland's Gap as rear guard. Colonel Dan McCook's Brigade was the last command to leave the field of Chickamauga, sending two six-gun discharges from Barnett's Battery, in the spirit of defiance, by the personal orders of Granger, characteristic of that erratic officer, who appeared on foot about 6 p. m. An hour earlier General Baird surprised McCook by the information that the whole army was being withdrawn from the field. At 8'clock McCook's Brigade retired, unmolested to Rossville, reaching its bivouac about midnight, or later. (See H. J. Aten's admirable History of the 85th Illinois.)

In February, 1865, the author of this review, on his return from the Battle of Nashville, paid a visit to General Scott, in company with his uncle, Robert Anderson, a former aide-de-camp to the old Chieftan. General Scott was enthusiastic in his praise of Thomas, and turning to my uncle, said: "Robert, you have always known my opinion of George Thomas. Now I wish to say that, in my opinion, the Battle of Nashville was the finest piece of grand tactics of the Civil War." Had Scott lived to know all the mysteries, now revealed, of the Great Battle of Chickamauga, such as the defence of Horseshoe Ridge, of the charge personally demanded of Reynold's Brigade, of the successful withdrawal of the troops in the face of a victorious enemy, of the quickly arranged stand at the head of McFarland's Gap, in what words could he have expressed his opinion of the strategy and tactics of his old favorite, who has proved himself one of the greatest captains of modern times.

Thomas' genius seemed to render him prescient for he was, always present at the critical moment, with a coolness that gave him instant, perfect control of his best judgment.

Truly, as Colonel Gracie remarks: "As the leader of the Federal Army, in its escape from complete annihilation, he received the crown of glory to which he was entitled."

While Colonel Gracie's book may not give the last word about the battle of Chickamauga, it exhibits a conscientious and laborious effort to harmonize and reconcile the many statements regarding this great conflict into a fair and acceptable narrative, in which it must be admitted he has succeeded most creditably. He has gone to the Official Reports and to reputable witnesses for his facts, and whether or not we accept all his deductions, we have before us *The Truth About Chickamauga* as it is understood by an impartial observer.

NOTE.—The following named commands and fragments, some of which were mere squads, but which did honor to their regiments, fought on Horseshoe and connecting Main Ridge from about 2:30 P. M. to 4 P. M., September 20, 1863.

Beginning on the right (west); Steedman's Division, consisting of Colonel John G. Mitchell's and General Walter Whitaker's splendid Brigades, 22d Michigan, 21st Ohio, General Van Devere's invincible troops, 87th Indiana, 58th Indiana, 17th Kentucky, 9th Kentucky, 19th Ohio, 79th Indiana, 14th Ohio, 4th Kentucky, 10th Kentucky, 13th Ohio, 19th Illinois, 18th Ohio, 11th Michigan, 44th Indiana, Harker's Brigade on the extreme left (east). Generals Steedman, Brannan, Wood and John Beatty were with their troops, and the divisions of Negley and Van Cleve were represented. The 18th Ohio battery, Lieutenant Frank G. Smith, U. S. Artillery, was on the line with the Snodgrass House.

CONFORMATION OF THE HORSE.*

BY GERALD E. GRIFFIN, VETERINARIAN THIRD FIELD ARTILLERY.

THE HEAD.

THE head of the horse, viewed in profile, should have an appearance of leanness and should exhibit a good depth of jaw, for the reason that leanness of the head is indicative of good bone and breeding, whilst depth of jaw in a lean head is evidence of good masticative power which is an aid to good digestion.

The muzzle should be velvety in texture with the lips firmly closed over the teeth and the nostrils large, and thin around their edges. A hanging or pendulous lip points to sluggish disposition, as a rule, whilst a small thick edged nostril is coarse in texture and has not sufficient expansion to admit the necessary amount of air to the lungs at the fast gaits; moreover, it may be observed that horses with small nostrils exhibit small caliber of windpipe and defective chest expansion.

The face should be straight and wide between the eyes, a conformation which leads to the assumption that the cavities of the head (sinuses) through which much of the inspired air passes are roomy.

The ears should be in proportion to the size of the head and when the animal is at attention they should be constantly on the alert; "*lop-ears*" are unsightly and usually bespeak lack of energy.

The head, considered as a whole, should not be out of proportion to the body, if too large it acts as an exhausting weight to the neck and shoulders, especially when the animal is fatigued and such a head is a fruitful cause of stumbling; if too small it will be found to be narrow between the eyes and ears—a sign of

*Extracts from lectures to the Line Class of the Army Service Schools, 1911-12.

restricted brain space—and possess small nostrils and shallow jaws. A head is said to have a "*Roman nose*" when the face is convex as it approaches the nostrils and is said to be "*dished*" when it presents a concave face line. A "*coffin-face*"—coffin shape—may be observed on a large, bony head when viewed from the front.

THE EYES.

To afford a wide field of vision the eyes should be set well to the outside of the head, but the eyeballs should be neither too prominent nor too deeply set in their sockets. "*Pop-eyed*" horses are usually shyers while "*sunken-eyed*" ones are usually dull and stubborn and do not see well to the side and rear without turning the head.

THE SPACE BETWEEN THE JAWS.

The space between the branches of the jaws, the jowl, should be large enough to admit the clinched hand so as to afford sufficient room for the top of the wind pipe (larynx) and to enable the animal to properly flex the head from the poll without bending the neck and thus getting "*behind the bit*."

The glint of the eye, the set of the ears, the quiver of the nostrils, the texture of the muzzle and the distance between the eyes and ears are fair indications of the animal's breeding, disposition and energy when intelligently considered.

SET ON OF THE HEAD.

The set on of the head is an important matter in a cavalry horse when control is considered. An animal showing thickness around the throat and narrow between the jaws almost invariably pulls head against the hand, while those having apparent thinness and looseness of the throat muscles which give an impression of lightness when viewed from the side, are usually light in hand after training, if this seeming looseness is combined with plenty of space between the jaws. Such a throat is not defective in muscles for when viewed from the saddle it will be seen to be strong and firm to the poll.

THE NECK.

An "*Ewe neck*" is one shaped like that seen on a shorn sheep. Such a neck is unsightly and horses possessing it poke the nose upward when bitted—"star gazer." A "*cock*" or "*swan necked*" horse is one having the neck set on like that of a fowl, such an animal carries the head too high to be trusted in riding or driving at a fast gait over rough ground. A "*bull neck*" is a short, thick, strong and rigid one which is a conformation not desirable in a saddle horse, although not so objectionable in an artillery wheel horse, if the shoulders are sufficiently well developed for the collar. "*Bull necked*" horses generally lean hard on the bits at all gaits and get out of hand readily.

The line from the poll to the withers, to which the mane is attached—"the crest"—is often over-developed and when it lops over to one side it shows that it gives additional weight for the fore-legs to carry, and as these same fore-legs are forced to support more than half the weight of the animals' body and usually three-fourths of the weight of the rider they should be favored as much as possible when the head and neck are taken into consideration.

Length and reasonable lightness of neck should be looked for in saddle horses intended for fast work, for the reason that the muscles which lift forward the shoulder lie along it and length of muscles, as a rule, means ease and quickness of movement; for artillery horses a strong, fairly short, bulky neck is usually regarded as proper as it enables these animals to go vigorously into the collar without irritation. It should be remembered, however, that a heavy muscled neck gives an impression of shortness.

The necks of all horses should be sufficiently strong and muscular to properly sustain the weight of the head and at the same time pull forward the foreleg. The muscularity of the neck is made evident when viewed from the saddle, a light looking neck will often be found to be exceedingly well muscled when viewed from this vantage point; whilst a weak neck looks thin and lacking in strength.

The crest should be firm and form a slight curve, with a slight dip just in front of the withers. The lower part of the

neck surrounding the windpipe and gullet should be loose but firm to the feel.

In saddle horses the neck should slope nicely into the shoulder, as this conformation admits of easy play of the forehands; but in artillery horses this should be a well developed triangular surface extending from the whithers to the point of the shoulders and this surface should be heavily muscled to afford a seat for the bearing surface of the collar.

It is erroneous to suppose that because a horse is too big and sluggish for cavalry he will do for artillery. If such an animal was fitted for artillery in the first place the chances are that he would not have been assigned to cavalry, good artillery horses being very scarce and expensive. Heavy cavalry undesirable usually have shoulders unsuited for artillery.

The forelock and mane is straight and spare in well bred horses; a heavy curly mane and forelock is considered by horsemen to be indicative of coarse breeding.

THE BREAST.

The breast commences at the termination of the lower part of the neck and comprises the region included between the points of the shoulders and the beginning of the front of the forearms. In its central portion is located the breast bone which passes between the forearms and terminates on the under aspect of the chest on about a line with the points of the elbows.

The breast should be of medium width and should be well and smoothly muscled; if very narrow it points to a narrow flat chest which permits the forelegs to approach each other so closely that "*interfering*" or "*brushing*" of the ankles with the hoofs may take place at the trot.

When the breast is too wide it is usually indicative of too much arch and insufficiency of depth to the ribs.—"*barrel chested*"—and this conformation, which places the forelegs too far apart, causes the animal to "*paddle*"—throw the hoofs well outward—at the trot; such a conformation and such a peculiarity of action detracts from speed and nimbleness and renders the saddle motion uncomfortable. Breast and chest are separate regions.

THE WITHERS.

The withers begin to rise from the slight dip at the point where the top of the neck ends, attain their maximum height between the shoulder blade and then slope gradually into the back; this peculiarity of formation being due to the disposition of the spines of this region of the spinal column—backbone—which rapidly increase in length from the first to the third or fourth, retain an even length to about the sixth and then gradually diminishes as they slope into the back. At their extreme height they lie close to the skin and are easily injured by undue pressure.

The withers of a riding horse should be of medium height and should not be too narrow, too fine or too thick; if too fine and high they are usually narrow and the saddle with its tendency to work forward, due to the slight incline of the muscles of the back from loins to shoulders, is apt to cause contusions, if no worse, through the medium of the pommel arch of the saddle. High, narrow withers afford an excellent opportunity for the blanket to slip to the rear with the lay of the hair even though the saddle has a tendency to work forward.

Low, broad withers whilst less objectionable than high, narrow ones are apt to be pinched by the front of the side bars of the saddle which may also interfere with the play of the upper part of the shoulders and this interference with defective withers is a fertile source of leg weariness and even lameness in front when the full pack is carried on long marches.

THE BACK.

The back, which extends from the withers to the loins, consists—outwardly at any rate—of a thick pad of powerful muscles extending several inches on each side of the spine, and on this muscular pad, which has the upper portion of the ribs for a foundation, the whole weight of the saddle, pack and rider must rest, the withers and loins being unsuited for sustaining much weight.

The best back for military purposes is a short, strong well muscled one showing a level surface from behind the withers to the loins; a long back is, as a rule, weak and is generally associated with shallow "*floating*" ribs and weak loins whilst

short muscular, strong backs accompany powerful loins and well "*ribbed up*" bodies both of which are indicative of strength and "*bottom*."

A back is termed "*swayed*" when it is unusually concaved; it is known as "*roached*" when it has a conformation resembling that of a hog's and is designated as "*razor*" when it exhibits a sharp edge along the back bone.

"*Swayed*" backs are poor weight carriers, are not well muscled and are easily galled; "*roached*" backs are strong but are difficult to saddle properly without tight cinching, whilst "*razor*" backs are generally the result of hard service on small rations which is responsible for the shrinking of the muscles of the back as well as the other regions.

THE LOINS.

The loins extend from about the place where the rear fold of the saddle blanket usually lies to a line drawn across the points of the hips.

The office of the loins is to place the weight of the body and load on the hind quarters to such an extent that the forehand may be enabled to move freely upward and forward. They should be broad, short and muscular as they assist materially in sustaining the weight of the head, neck and shoulders at the walk, trot and gallop.

Long, narrow loins are generally weak ones and are easily fatigued. When fatigued they are unable to function properly at the fast gaits while under pack conditions, and stumbling in front and "*disuniting*" behind are soon made manifest.

A horse "*slack*" in the loins is an uncertain and poor jumper who usually hesitates and flounders at his hurdles. Skeletons of long, weak loined horses frequently show one extra vertebra in this region of the spinal column.

THE BODY.

The body includes the flank, belly and chest and its shape is dependent on the spring and depth of the ribs and the length of the back and loins. Some horsemen refer to the girth around the flanks as "*the barrel*."

THE RIBS.

The ribs should spring out well from the back bone and should show depth from the spine to the breast bone in order to afford plenty of room for the lungs and heart; they should extend well back to near the point of the hip, such a conformation being known as "*well ribbed up*" and "*short coupled*."

At the termination of the breast bone, underneath the chest and about on a line with the point of the elbows—the "*cinch place*"—there should be a slight depression due to the upward and backward curve of the cartilage of this bone; such a "*cinch place*" affords a good seat for the cinch even with poor backs and eliminates the use of the split or corded cinches the strands of which are intended to bury themselves in the hair and skin and thus prevent slipping forward and backward.

Horses with poorly arched ribs are known as "*slab sided*."

From the "*cinch place*" to the stifle the belly should have a very slight upward tendency and should be plump and full in outline, depending of course on the animal's condition of flesh. When it runs up between the legs like a greyhound's it is known as "*washey*" or "*tucked up*"; if distended and pendulous it is termed "*pot belly*". A "*tucked up*" belly is often an evidence of weak digestion and poor "*bottom*" whilst a "*pot belly*" spreads the rider's legs unnecessarily which is unpleasant at any gait.

The body for military purposes should be "*deep through the heart*," should have deep "*floating ribs*" and should be "*well ribbed up*." Shallow bodies lacking in depth and having bellies running up light behind are unable to stand the strain of hard field service, whilst "*slab sided*" bodies are usually narrow, are deficient in lung expansion, strong heart action and have the front legs so close together that "*interferring*" may be expected.

THE FORE LEG.

A good shoulder should start from withers of medium height and thickness and possess a long, fairly well sloped shoulder blade which should be well muscled and smooth in its entirety. When the shoulder blade is long and well sloped it will be found that the distance from the "*point of the shoulder*" to "*the point of the elbow*"—the arm—is quite short; the converse of this is true. Shortness of the arm is a desirable con-

formation indicating as it does that the shoulder blade is long and sloping.

The muscles which fill up the space behind the "*point of the shoulder*" should be large and powerful as their function is to draw backward and upward the leg from the elbow down.

"*Upright shoulders*" are those in which there is not sufficient slope; "*short shoulders*" are those lacking in length. The former while fairly well suited for draft purposes, if the collar bed is sufficient, lack the necessary spring and elasticity so essential in a saddle horse; the latter are deficient in the length of muscle so necessary for quick and graceful movement.

Good shoulders should be well set back on the ribs for if they are set forward on the neck, even if otherwise good, they permit the weight of the load to be thrown too far to the front thus overloading the forehead.

The forearm should be long and well muscled, and if the arm is short, the forearm will be long. When inspected from the side it should be broad at the elbow, a conformation that shows good attachment for the heavy muscles behind the shoulder blade, and its muscles should be well outlined and taper gradually to the knee.

Looked at from the front it should be narrow with bulging muscles on the outside and clean and hard on the inside where the bone is next the skin.

The knee should be large broad and flat in front, deep from front to rear and the knob of bone at the back should be large and prominent. A large knee offers plenty of room for the attachment of the strong extension and flexor muscles of the cannon.

When the line of knee deviates backward it is known as "*calf knee*" and when it is decidedly convex in front it is termed "*over at the knee*" or "*knee sprung*." "*Tied in below the knee*" is a term used to indicate that the measurement across the cannon and tendons immediately below the knee is smaller than the same measurement taken lower down; such a knee does not stand hard usage especially over hurdles with a good weight up.

When the cannon shows good measurement, it is said to have "*plenty of bone*," but this measurement includes the ten-

dons so that the term "*plenty of bone*" should mean that there is plenty of room for them and that they are well developed.

"*Filled*" or "*gummy legs*" are those that do not show the clean straight outline of the "*back tendons*."

The pastern should be strong and of medium length and sloped short. Upright pasterns do not absorb the concussion and if the shoulder blade is upright also the animal is said to be a "*pounder*". Long sloping pasterns usually accompany a very long, sloping shoulder and while they possess plenty of elasticity and are pleasant riding at all gaits nevertheless they are not good weight carriers and quickly show fatigue.

THE FOOT.

The hoof should be of bright dense, healthy, horn without cracks or ridges and it should be in proportion to the size of the animal; it should be placed squarely on the ground and should not toe in, "*pigeon toed*," neither should it toe out, "*soldier toed*." Horses that toe in in front usually have a short mincing trot, while those that toe out in front throw their feet well outward at this gait and are known as "*winders*;" these "*winders*" are uneven in their stride and unsafe at the jumps, their take off being clumsy and uncertain.

In horses that toe out it may be observed that the elbows turn in toward the chest. Horses with narrow hoofs are said to be "*mule footed*" those with wide flat hoofs are often designated as "*splay footed*;" both forms are undesirable.

The sole—ground surface of the hoof—should be well concaved and the frog—horny sole pad—and bars well developed; such a ground surface is able to go safely for a long distance if a shoe is lost, whilst a sole with small thready frog, and weak bars inflection of hoof wall at heels is more subject to bruises and is unable to withstand the contact of the road for many miles without a shoe.

The heels should be well developed and should bulge slightly while the coronet should be smooth, clean and of an oily feel.

The condition of the hoof is a fair indication of the general health of the animal; a clean, healthy looking hoof indicating good health of its owner for at least a year previous—the time it

takes the average hoof to renew itself—whilst ridges suggest attacks of inflammation or disturbances of the digestive tract within the same period.

THR HIND LEG.

The quarters should be strong and heavily muscled running straight from the croup to the root of the tail, if possible, although a slightly "*drooping quarter*" is not objectionable and is characteristic of many excellent Irish hunters. When the droop is very prominent it is called "*goose rump*" and such quarters are not strongly enough muscled to propel the body and its loads forward without undue fatigue.

The thigh, from stifle to hock should be long and well muscled so that the leg may be placed promptly and securely beneath the body when in motion. The bunch of muscles found at the lower and outer part of the thigh is often alluded to as "*the gasking*" and the thick, strong tendon running from the muscles at the back part and which is attached to the point of the hock is known as the "*hamstring*" or "*tendon of Achilles*." A horse lightly muscled between the thighs is known as "*split-up-behind*."

The hock should be large and clean and the point should be prominent and well developed; from the point the back tendons should drop in a stright line to the fetlocks without bulging at the "*curb place*" which is about six inches below and in a line with the point. The inside aspect should be deep and clean, showing no enlargement over the "*spavin place*," but it should exhibit a prominent knob of bone where the thigh bone ends. When the hocks lean toward each other they are termed "*cow hocks*," and when they are bent under the body they are known as "*sickle hocks*." When the thigh slopes well backward and the hocks placed well to the rear, the conformation is designated as "*cat hams*." Large strong hocks afford good attachment for muscles and are better able to stand the strain and weight put on the quarters than light smooth ones. "*Cow hocks*" are generally weak and their action is defective at all gaits; "*sickle hocks*" generally reach too far under the belly and are consequently poor propellers, although if the back tendons are large and strong their owners are good at the fences, other

things being equal. "*Cat hams*" give a stilty motion to the gait at the trot and with this conformation the animal is very apt to become disunited at the leads.

Considered as a whole the hind legs should be in proportion to the other regions of the frame, they should be well muscled, possess good length and depth of quarter with long straight dropped thighs and hocks and good, clean well defined tendons. When it is remembered that the hind legs are body propellers and that they are frequently called upon to endure severe strain in maneuvering, galloping, jumping and holding back in the wheel it will be realized that good strong hocks are essential to continued soundness behind.

From the hock to the hoof the conformation is essentially the same as in the foreleg, except that the hoof is usually smaller and narrower and the slope of the pastern greater.

DAILY DIARY OF EQUITATION WORK AT THE MOUNTED SERVICE SCHOOL.

FOR THE MONTH OF JUNE, 1912.

TRAINING CLASS.

Schedule June 1st to June 15th—about 1½ hours per day.

1. Outside 1 hour: Road work, canter, and $\frac{3}{4}$ -mile gallop at 20 miles per hour.
3. Outside 1½ hours: Put on bit and bridle, with curb chains very slack. Easy road work to accustom horses to the biting. Light training work.
4. In hall 1½ hours: Testing colt individually through all the exercises.
5. In hall 1½ hours: Test of training and jumping. Jumps 3 ft. 8 in.
6. Outside 1 hour: Road work and gallop.
In hall: Tests on training and jumping.
7. Same as 6th.
8. Lecture by Senior Instructor instead of usual ride.
- 10, 13th. Training for graduation ride, 1½ hours per day.
14. Graduation Ride. The ride of this class was intended to show the steps in the training of a charger, taking it up from where the Breaking Class left off and continuing to where the schooled horses took it on. The following exercises were shown briefly but in a clear cut, definite manner; individual circles on forehand half turn in reverse, changes of gaits, the halt from each of the regulation gaits, and taking each gait from a halt, the drill by threes showing turns to right and left, about on forehand and on the haunches, haunches right and left, two tracks right and left oblique at school trot, the gallop in column with change of lead on changing hands; individually each rider executes a figure of eight at canter with two changes of leads at the canter; in column, the halt in line from a gallop, swinging from the track by the flank. For the jumping exhibition four jumps were set,

two small fences and two bar jumps 3ft. 10 in. The rider took the track on the left hand and after the second jump changed hands and changed leads and took the next two on the right hand. The two larger jumps were faced to the main gallery. The colts were required to maintain an even canter all the way.

SCHOOLED CLASS.

Schedule June 1st to 15th—about 1 hour per day.

3. In hall 1 hour: Executed the exercises with a good deal of collection demanded. Jumped one 3-foot hurdle several times.
4. In hall 1 hour: Review, same as 3d. Outside 1 hour: For walk and grazing.
- 5-13th. Practiced for the Graduating Ride. After forming track, on right hand at the trot, the movements were as follows: (a) large circle and spiral; (b) haunches in and shoulder in (at slow trot); (c) by left flank, backward, forward, slow trot and by right flank; (d) with right lead canter, by threes, by right flank, backward, forward, and with the left lead canter, track to the left; (e) on haunches, individual circles; (f) by threes by left flank, left oblique, change lead and take track to right; (g) counter gallop (canter); (h) slow trot, canter, change hand and change lead in center of hall; (i) by trooper on two tracks to center and change, change lead again at track; (j) all walk except leader of first platoon, individual change of lead; (k) canter with distances between threes extended, threes column left and form three circles, take track and slow trot at head; (l) canter, platoons column left and form circle and cross; (m) three concentric circles, the center and outer circles moving on right hand and the inner circle on left hand, last three of second platoon execute troopers left about at trot, all of first platoon execute on haunches troopers right about at trot, then on haunches left about at canter, column of twos form, at trot, class pass out of hall and chang from double to single (snaffle) bridles.

After the previous exercises and after the hurdles had been placed in the hall, three in number, each 3 ft. 8 in. high, two of which were placed on the track (one on the right and one on the left) and one in the center of the hall on the diagonal, the riders returned one at a time at signal and rode once over the course.

14. Had Graduating Ride outlined above which required about forty minutes, including the time necessary for handling the hurdles.

JUMPER CLASS.

Schedule June 1st to June 15th.

1. In hall: Twice over 4 ft. bars and 4 ft. stone wall, rapping bar used.
Outside: Road work.
3. In hall: Twice over 4 ft. bars, rapping bar used.
4. Over Magazine Cañon course in pairs.
5. Led on road 1 hour.
6. Road work.
7. Try out over Liverpool jumps.
8. Lecture by Senior Instructor.
10. In hall: Try out over course for final ride.
11. Try out over the jumps on steeple chase course, one jump at a time.
- 12 and 13. Try out over the indoor course.
14. Graduating Ride, indoors, over the following course, bars 4 ft., tripple bar 4 ft., railroad crossing 3 ft. 9 in. and stone wall 4 ft. 3 in. Also taking three fences 15 feet apart with arms folded and without reins.
15. Graduation Ride, out of doors: This ride was held at the race track over a series of four jumps such as are usually found on steeple-chase courses of this country, and built according to the specifications, consisting of a water jump, a board fence 4 ft. 3 in., a hedge and a Liverpool. The riders took the course one at a time and rode at a three minute pace or better. These two rides were intended to present such obstacles to the riders as they would be liable to encounter in mounted competitions, whether in the show ring, on the steeple-chase course or between the flags of a cross country run.

SECOND TRAINING CLASS.

Schedule June 1st to June 6th.

1. In open-air hall, 55 minutes: Work out at will for five minutes. Executed circles, abouts, half turns in reverse, haunches right and left, backing, flexions and gallop individually on both hands. Grazed five minutes.

3. In hall $\frac{1}{2}$ hour: Worked at will at walk and trot for ten minutes. Executed flexions (lateral and direct), circles, spirals, serpentines, and changes of direction at will. Outside: Rode in woods and jumped logs and small rail hurdles; jumped ditches on Republican Flats.
4. In hall 1 hour and outside $\frac{1}{2}$ hour: Review, same as 3d.
5. Attended exhibition ride given by the Olympic team on the race track grounds.
6. Turned out to pasture.

BREAKING CLASS.

Schedule June 1st to June 14th.

1. In hall: Longed, rode at walk, trot and canter. Drill at jog trot, canter, change of direction, serpentines. Outside for half hour at walk.
3. Same as 1st, and in addition dismounted flexion and training with whip.
4. Outside for road work.
- 5, 6 and 7. Same as 4th.
- 8-13. Preparation for final ride.
14. Graduation ride in hall: On the track, moving to the front, first at a walk then at a trot; large circles and spiral at trot then gallop on large circles; trot, serpentine, and take gallop on large circle on opposite hand; take track at gallop, trot, by flank, walk and halt; all work at will for a few minutes at walk and then at trot, executing change of direction, abouts and circles and riding on straight lines.

THE NEW ORGANIZATION OF THE SWISS ARMY.

BY AN OFFICER ABROAD.

“AN army is a living organism in constant process of development.” These significant words appeared in the message to the Swiss Congress of 1906, recommending certain changes in the military organization, and they seem worth repeating at this time, when the improvements made by the law of 1907 are followed today by further changes of serious import.

The law passed in 1909 greatly increased the efficiency of the army; lengthened the time and made more intensive the the instruction of recruits; reduced the age limits of officers and resulted in a military force whose fighting value many experts from professional armies have publicly attested and which very few have ever decried. This law retained the former arrangement of the forces in four army corps—but from the first, a division of opinion on this subject declared itself in Switzerland. The agitation in favor of six strong divisions in preference to four army corps grew in the army and in parliament. In 1910 the chief of the General Staff, Sprecher von Sternberg, made a speech before a large assembly of officers of the army, in which he exposed the principles which governed his warm advocacy of the divisional organization.

One paragraph of his address seems worth quoting: “We should be more and more convinced that if some day the honor and the independence of our country demand it, it is not by remaining on the defensive that we would fulfill our duty, but by resolutely undertaking an offensive war. Therefore our military organization should be based upon the use which we propose to make of our army.”

¶ The federal message of June, 1910, contains arguments full of information, setting forth the reasons why the changes it proposes should be made, and above all why a divisional or-

ganization is more effective for Switzerland than the arrangement heretofore existing, viz: four army corps.

The following is a very brief analysis of this message, touching only upon those points which have special interest for us. The whole report in both its military and philosophical analysis is well worth reading.

Before proceeding with the consideration of the question of divisions versus army corps, the report touches upon the necessity of making the military districts accord with the latest census; the creation of mountain troops; the rejuvenation of the field army, many of whose elements were composed of the oldest men of the reserve; relieving the field army of certain duties which could readily be fulfilled by less active troops; reorganizing the train, and the introduction of mechanical transportation; the adding of machine guns to the infantry, and howitzers to the field artillery.

DIVISIONS AS AGAINST CORPS.

In adopting the organization in army corps, Switzerland which can only form a small number of these units, finds her strategical combinations limited by this small number, or else is obliged at the very beginning to break up an already constituted organization.

On the other hand, the organization into divisions presents the additional advantage of being a return to national traditions and of being better adapted to the territorial divisions of the country. Moreover, the adoption of the three brigade division brings with it all the benefits of a three unit organization, permitting the use of a reserve, without breaking up tactical units. In many cases the combination of the principal arms into a mixed brigade furnishes an excellent fighting unit and, in time of peace, furnishes a preparatory school for forming division commanders as well as for teaching the co-operation of the different arms. The practical teaching of strategy demands means which do not exist in Switzerland; therefore, officers who are already familiar with the tactics of a division would have to practice and form their strategical faculties by staff rides, the war game, and study of history. Moreover, the formation of four army corps staffs

in addition to the division staffs constitutes a considerable burden. With the divisional organization, on the other hand, division staffs are constituted and exercised necessarily in peace and maneuvers as well as in war. Two or three commanding generals and staffs, suitable for the command of an army composed of two or more divisions, are all, therefore, that remain to be formed in time of peace. The organization is less top heavy and lends itself to a greater number of combinations than would be possible in a rigid subdivision of the forces into four army corps.

These considerations lead to the adoption of the division organization,—six strong divisions being organized out of the existing army corps. Each division is composed of three brigades of infantry of two regiments each, the regiments being normally of three battalions; a bicycle company; a group of three companies of machine guns; a group of two squadrons of cavalry; a brigade of two regiments of artillery, each regiment of six batteries of four guns each; a battalion of two batteries of four mortars each; a division park of two groups, each group composed of an infantry park company and two artillery park companies; in addition to these, one park company for the howitzers; a battalion of engineers of four companies; one pontoon train; a telegraph company; six sanitary companies, and two subsistence companies.

The total active infantry is organized into 106 battalions. The average strength of the active infantry, in service from 1899 to 1907, was 113,638. We see, therefore, that each of the 106 battalions of active infantry would have over 1,000 men or about 270 per company.

Besides this, there are fifty-six battalions of landwehr, instructed and armed and available to re-inforce the divisions as additional brigades if necessary, serve as *étape* troops, or for the defence of positions prepared in advance, etc.; leaving the active army, composed of the youngest men, and the best instructed, untrammelled and undiminished for undertaking an offensive campaign.

In both the old and new organization there are twenty-four squadrons of élite cavalry. Two squadrons are assigned to each division and twelve constitute a brigade at the disposal

of the army commander. Besides these, there are twenty-four squadrons of landwehr cavalry.

The artillery consists of seventy-two batteries, twenty-four battalions, twelve regiments, six brigades of field artillery assigned to the six divisions. There are also four battalions of mountain artillery, one assigned to each brigade of mountain infantry; six battalions, each of two batteries, of howitzers.

The ammunition supply is assured by twelve park companies for infantry and twenty-four for artillery, each division having a park composed of two battalions. There are also four park companies for mountain troops, and six for howitzers.

There are nine ammunition trains for mountain troops and eight ration trains for the same.

The report insists that for a small army the division is not only a fighting unit, but a strategic unit; that its organization renders it independent, not only on the march and in battle, but permits its commanding officer to be given authority to communicate directly with the supply and road services as well as the recruiting and evacuation service.

All of the artillery, both field and mountain, is assigned to the divisions, in order to teach this arm its rôle in co-ordination with the others, and above all to maneuver along side the infantry.

The ammunition supply train is calculated so as to give 306 rounds per musket, 510 per gun, 304 per howitzer.

To handle a division of this strength requires a more numerous staff than for an ordinary division, especially one entering into the composition of an army corps.

Five automobiles are assigned to the headquarters of each division.

The report suggests the importance of a useful division of work according to personal aptitudes, and indicates that for the instruction of the staff officers of a division, staff rides and studies, map exercises, and similar work under the general or his chief of staff, are of more value than maneuvers with troops.

The eight bicycle companies constitute a novelty. One is assigned to the headquarters of each division, one to army headquarters, and one to the brigade of a cavalry.

Company commanders are now given a horse, for the first time, and certain other officers as regimental quartermasters, surgeons, supply officers, are mounted on bicycles.

The armed landwehr remains at the strength it has long had of 50,000 men, but it is to be reorganized into 212 companies of 170 men each. Those coming from mountain troops will man the mountain fortresses; the other sixteen regiments, forming six brigades, will be available for any use considered necessary.

There can be no doubt that this reorganization of the Swiss army into divisions, which at this moment is being effected, is the result of profound study during long years by competent men, aided by the best advice which Europe could afford. It is especially interesting to us, since the Swiss army has a strength only slightly superior to the total of all our regular troops, wherever stationed, plus all the organized militia, or, say, 250,000 men. The organization decided upon is surprisingly similar to that presented in our Field Service Regulations for a division, viz: three brigades of infantry, two regiments of artillery, a battalion of engineers, and auxiliary troops of every sort. There seems no doubt that more strategical combinations can be made with six strong divisions than with four weak corps; that it is easier to select and instruct in time of peace six division commanders than it is to make efficient four corps and commanders and eight division commanders. These and many other considerations mentioned in the report of the Federal Council, should go a long way towards convincing us, if that were necessary, that in rejecting the army corps organization for our service the greatest wisdom was shown.

This new organization goes into effect April 1, 1912.

T. M. B.

CAVALRY RAIDS—THEIR VALUE AND HOW MADE.*

BY CAPTAIN C. R. DAY, FIFTH CAVALRY.

THE raid owes its importance as a factor in modern warfare to its development in our Civil War. While it is true that raids had been made prior to that time yet "in strategical results, in skillful execution and far reaching effects, the American raids surpassed all previous operations of the kind and have as yet been unequalled."

Foreign military writers have apparently not placed any value on the lessons taught by our raiders, either ignoring them altogether or else treating them as possessing little or no merit, but instances are not lacking in which foreign armies might have made use of such operations and materially bettered their situation.

What influenced our unmilitary people to adopt this hitherto practically unknown manner of operating is an interesting question. Effort will be made to show that it did not suddenly spring into existence, but was a gradual and natural development due to the conditions of life and experiences of our ancestors.

The early history of our country is a record of struggles with Indian tribes and its pages are full of the exploits of small parties or bands traveling many miles through deep forests in order to fall upon the enemy unaware and wreak the vengeance peculiar to that time. Our forefathers were not slow in recognizing the value of this style of fighting and quickly adopted it as their own and soon were able to beat the Indian at his own game. As the conflict between the whites and the Indians moved farther to the west, the regular troops began to take a more active part in the contest but the same style of fighting continued.

*Thesis prepared at the Staff College, Army Service Schools, 1911-12.

In the Mexican War the American soldiers did not hesitate to put into practice the principles learned from the Indians. Small bodies cutting loose from all home communications and pushing boldly forward for many hundred miles into hostile territory, clearly demonstrated the spirit, boldness, self-reliance and stamina of the raider.

In this connection and showing that similar conditions in the lives of people produce similar results, it may be mentioned that the Cossacks are the raiders of Europe and the Boers of Africa.

Having seen how the spirit of the raider became broadcast in our land, let us next consider how it happened that he was so opportunely equipped for the work, for a man may have the heart and stamina of a raider and still lack some of the essential qualifications.

After the Indians had moved out, the white settlers busied themselves in cultivating the soil, establishing their social institutions and settling their private grievances and disputes and it is at this point of our development that the horse and pistol came into general use, the former being necessary for tilling the soil as well as for social and business relations, the latter useful for self preservation and in deciding many personal differences and points of honor peculiar to the times. Comfort and self interest demanded an expert use of both. But it is, of course, to be understood that all sections of our country were not equally blessed or cursed with the habits referred to above.

Coming now to the period of our Civil War, we find a population of natural horsemen, accustomed to the use of fire arms, especially the pistol, with a knowledge of warfare inherited from the old Indian fighters and a brief experience in the Mexican War. In fact we have the raider in person ready for the war which offered every favorable condition for his kind of warfare.

During the first years of the Civil War the authorities, although constantly demanding the advance of the Union Armies, were unwilling or unable to furnish men in sufficient numbers to meet the enemy at the front and at the same time properly guard the lines of communication and fortunate indeed were those commanders whose lines of supply were under the

protection of the gun boats. The Southern Raiders operated against these long railroad lines in a country thoroughly familiar to the men and filled with friendly inhabitants. It is to the credit of some of the Union commanders that they refused to advance under such adverse conditions although they thereby incurred the ill will of the administration and possible loss of their command.

The Northern raiders were favored by the fact that a large part of the population of the Southern states was friendly and that the Southern Confederacy was, as Grierson reported, a shell the outer rim of which once passed there was but little danger from any force in the interior. But this shell like condition did not hold for the Northern states, for when Morgan made his celebrated raid around Cincinnati approximately 100,000 home guards were called out to expel the invaders. The shell was not hollow but the inside was of a very non-resisting material. It was the regular troops that did the work.

Activity in raiding was, as a rule, confined to the side, which at the time, was superior in cavalry. Such superiority seems to be necessary before attempting this kind of operation and is the probable reason why the Japanese Cavalry failed to raid the long line of communications in rear of the retreating Russian Army in the recent war in Manchuria.

The great prominence given to the raids in the Civil War is not entirely due to the raiders. Their efforts have been ably seconded by our historians who have attached the term raid to a numerous and diverse class of operations among which may be mentioned Early's effort to capture Washington in 1864, Jackson's movement to the rear of Pope's army, Wilson's operations in Alabama in the spring of 1865.

The following quotation, bearing on this broad use of the word raid is from an article by Major Elliot on Sheridan's raid against Richmond. The Major was one of the participants in that raid. "There is considerable difference to be observed between expeditions of this character and the dashes by cavalry into the enemy's country constituting the raids proper." In the latter "a small body of horesmen would travel at great speed, avoiding any encounter with the enemy in force, deceiving and deluging him by feints and doing all the

damage possible to railroads and other property, then retreating as rapidly, dexteriously evading pursuit and scarcely permitting any rest for horses or men until they were safe behind the shelter of their (own) lines."

In Sheridan's raid the column of march was about thirteen miles long, the gait usually a walk, the distance traveled from fifteen to twenty-five miles per day and the object of the expedition was to draw the Confederate Cavalry in pursuit and as Major Elliott justly remarked there is considerable difference between such a movement and the one which he describes as a *raid proper*.

Differing from the two classes of raids just referred to, but to a certain extent resembling each, are some of the raids of the Confederate partisan cavalry which under such leaders as Morgan and Forrest more than once paralyzed the advance of the Union armies. The following condensed account of one of Morgan's raids will illustrate the difference. In July 1862 he made an expedition which has been designated "The First Raid into the Blue Grass Region of Kentucky." He reported the result as follows: "I left Knoxville on the 4th day of this month with about 900 men and returned to Livingston on the 28th with nearly 1,200, having been absent just twenty-four days, during which time I have traveled over 1,000 miles, captured seventeen towns, destroyed all the government supplies and arms stored in them, dispersed about 1,500 home guards and paroled nearly 1,200 regular troops. I lost in killed, wounded and missing of the number that I carried into Kentucky about 90."

As to the manner of operating in central Kentucky, General Duke stated as follows: "It was now deemed good policy to march more slowly, obtaining perfectly accurate information and increase the confusion already prevailing by threatening all points of importance. This policy was not a hazardous one, under the circumstances, for although forces surrounding the point where we now were, were each superior to our own, yet by getting between them and preventing their concentration and industriously creating the impression to which the people were at any rate disposed, that our force was 4,000 or 5,000

strong, Morgan had demoralized them and they were afraid to come out and meet him."

By means of such ruses he maintained his position in the midst of his enemies for two days meanwhile recruiting and supplying his command, 200 of whom started on this raid without arms.

The effect on the enemy is illustrated by the following telegrams: General Boyle to the President: "Send me troops or Kentucky is lost;" Lincoln to Halleck: "They are having a stampede in Kentucky, please look to it."

From what has just been said, it would seem that many of the raids of the Civil War resemble each other in name only and that they permit of division into distinct classes but a closer study will show that all such movements possessed certain elements in common and this enables us to arrive at the accepted military meaning of the word which is submitted to be the following: A raid is a strategical offensive movement of an independent command without lines of communication or supply.

As a matter of fact we know that the above definition is not the generally accepted view of the present day for it contains no limitations as to secrecy, fast marching or avoidance of general combat.

According to our Cavalry Drill Regulations: "Raids are isolated, independent cavalry operations, conducted with secrecy, by rapid marches, usually avoiding general engagements" and the objects of such expeditions are: "To harass and weaken the enemy by drawing off in pursuit his cavalry or other troops, or by causing him to guard a great number of points; to threaten, interrupt or destroy his communications; to destroy his depots and source of supplies; to gain information; to cause alarm in the enemy's country, or create a sentiment unfavorable to the prosecution of the war; to interfere with the mobilization of the enemy's forces at the beginning of a campaign; to effect the release of prisoners."

The absolute value of any raid cannot be determined. It is an easy matter to figure up the total of supplies destroyed, men and animals captured and killed, but there are other elements whose value can only be guessed at, but these are equal

if not greater than those enumerated. The moral effect, the confidence which a successful raid inspires in the ability of their leaders, the depressing effect on the enemy, the worry caused the opposing commander, are some of the things that can only be estimated. But the value of a raid is not absolutely dependent upon its success. The two terms are not synonymous. The commander of a raiding force is responsible for its success, the commander of the army for its value.

On April 17, 1863, Grierson, with 1,700 cavalry, left La Grange, Tennessee and reached Baton Rouge on the 2d of the following month, having marched more than 500 miles in hostile territory, passing in rear of the Confederate Army, destroying the railroad at several points and burning considerable quantities of supplies. The great value of this raid was that it distracted the attention of the Confederate commander and caused him to scatter his forces in an attempt to intercept the invaders at a time when he should have given his whole attention to the operations of the Union Army.

Sheridan's Trevilian raid has generally been accounted a failure. "a useless expenditure of horse flesh," and while such might appear to be the case judging from what was actually accomplished still the movement was of great value to Grant in the secret transfer of his army to the South side of the James as it freed him from the observation of a large part of the Confederate cavalry.

Stuart's Chambersburg raid took place shortly after the battle of Antietam. The raiders captured the town and a few horses and got safely back but he, Stuart, "ought to have lost his whole command." In this operation the reward was out of all proportion to the risk run. It is hard to see what benefit, if any, was gained and it requires little imagination to picture the effect that the capture of the flower of Lee's cavalry would have had at that time.

In December, 1862, Grant was preparing a movement against Vicksburg. A single line of railroad connected his base, Columbus, Kentucky, more than 200 miles distant, a secondary base being at Holly Springs. Just as he was about to move, Forrest raided and interrupted his line of communication and Van Dorn raided and destroyed his base at Holly

Springs. Thus his advance was not only paralyzed but he was compelled to put his army on short rations and fall back to Memphis. Meanwhile, Sherman ignorant of what had happened proceeded to carry out his part of the plan and suffered a heavy repulse. This is one case in which the raid decided a campaign, a battle could have done no more.

During the same month, Bragg at Murfreesboro was putting his army into winter quarters and believing the fighting over until the following spring dispatched Morgan and Forrest on raiding expeditions, Morgan into Kentucky and Forrest as just stated above, when unfortunately for him Rosecrans decided to advance. The battle which followed was fiercely contested and for some time the result hung in the balance, in fact it might be said that victory was practically in the hands of the Confederates but they lacked the increment necessary to throw the scale. Is it too much to say that had Morgan been present with his command, which he claimed was the finest cavalry division in the South, the additional weight would have secured the victory? His raid was a great success, he accomplished wonders, but his power was wasted on secondary objects and on his return Murfreesboro no longer belonged to the South.

On October the 2d, 1863, Wheeler raided and destroyed Rosecrans' great wagon train of 500 wagons which were en route with supplies for the Union Army at Chattanooga.

The foregoing represents the results of a few of the raids of our Civil War. Such operations naturally favor a nation which is fighting on the defensive as they not only threaten the existence of the enemy's army but also compel him to make many detachments which cannot be used in the decisive battles at the front. They are one of the chief causes why "attacking armies melt away like fresh snow in the spring time."

The operations previously referred to were voluntarily made according to prearranged schemes or plans but the movements of cavalry and the fortunes of war frequently place mounted troops in positions where a dash for safety across the enemy's lines of communication is the only alternative to surrender. Such was the position of Davis' cavalry when it escaped from Harper's Ferry and captured Longstreet's ord-

nance train. Bazaine's 15,000 cavalry remained to be surrounded in Metz and neglected the excellent opportunity for raiding the German lines of communication. Stuart's cavalry being sent to make a forced reconnaissance in order to locate the right flank of McClellan's army penetrated so far in rear of the enemy's position, that its commander considered it safer to go on than to turn back.

Before attempting to describe how a raid should be made, one should first study the guiding principles of the great leaders of this class of operations and the following are given as some of those that were founded on experience and stood the test of war:

The leader must be a man of quick decision with nerve to back his judgment, able to promptly and accurately estimate the value of information as well as the advantages or disadvantages of the terrain. He must be a natural leader of men. The men should be especially selected, well disciplined and capable of withstanding great fatigue. The march should be on one road with only such detachments as are considered necessary. The rate of march should depend on the distance, the forage available for feeding and the horse supply of the country invaded. The fact that a raid is contemplated as well as its destination should be made known to no one except the commander, until the force is well on its way.

Information is of vital importance and on a long raid scouts and spies should be sent ahead to collect information and guide the column. According to Steele, "it may be laid down as a rule that a cavalry raid covering many miles of country * * * in order to achieve success must be made in a country whose inhabitants are friendly."

Every possible ruse should be employed to deceive the enemy as to the objective or mission of the raiding force and its numbers. Some artillery should accompany a raiding column, the number of guns being in proportion to the size of the command. On long raids the mental and physical strain frequently passes the limit of endurance, necessitating the most strenuous exertions to keep the men and even officers from leaving the column. In Grierson's raid one of his officers after safely performing a most dangerous detached operation for the

purpose of deceiving the enemy, became insane soon after re-joining, due to the great mental as well as the physical strain to which he was subjected. A command that is worn out physically is easily demoralized and for that reason alone a fight should always be avoided in the latter stages of a raid, not to mention the additional reason that the enemy is concentrating and endeavoring to cut off the invaders.

The command should, and usually does, live off the country and this necessitates dispersion. Men will not go hungry if there is a chance to get something to eat in the nearby houses and while looking for food it is only a step to look for whisky, which is universally recognized as the medicine par excellence for a tired out man.

But if a raid is hard on men it is simply death on horses and after every hard raid there must be a period of rest and re-outfitting, and any commander who orders such an expedition should bear this fact in mind.

A raiding force should always be liberal in granting paroles, and let the fact be known to the enemy. The opportunity of visiting home and mother offers peculiar inducements to many soldiers to surrender rather than fight.

The present theory of war contemplates vigorous and continuous action. A campaign once begun is pushed to the decision. In such a case there can be little room for detached action and the place for cavalry will be the army. Raiding under such circumstances will be the exception. But this theory presupposes two armies in existence which unfortunately might not be the case with us if we were at war with one or more strong military nations. It may be a question then of having to surrender a certain amount of territory with the hope of recovering it later. If such should be the case then the raid might materially assist in delaying an advance into the interior. Modern improvements have put the raider at a disadvantage and if we may believe our aviation friends the raid may no longer be necessary for when the great birds of the air begin to circle over armies, cities and railroad bridges and drop at will tons of dynamite, it will be time for man to harken back to his ancestors and look for a cave. The wireless telegraph will make it difficult for the raider to out travel the infor-

mation of his advance. The automobile and motor cycle can now be used to carry infantry to guard fords and mountain passes in order to cut off raiding parties, but the raider has usually had to take desperate chances and he will have to do so in the future. Besides the elements may come to his assistance—it always rains when battles are being fought.

The large size of armies of the present day also hinders the raiding of their lines of communication for the reason that such armies usually cover a broad front and as the raid is generally started from a point well out on the flank it is evident that before reaching the main lines of supply the distance traveled will be considerable and the point at which it is intended to strike is necessarily well in rear. The broad front of the Japanese army made it almost impossible for the Russians to raid the short railroad line behind it, but had the Japanese advanced further north the Russian Cossacks would have had a much better chance to demonstrate their ability as raiders.

Let us suppose that a raid is contemplated under present conditions, what would be the ordinary method of procedure and the composition of the force.

The proposition is first carefully considered by the General commanding who particularly estimates the value to be gained as well the risk to be encountered; the effect that the absence of the cavalry will have on his command; the length of its absence and its condition on return. If he believes the reward justifies the risk, he will give instructions to the commander of the raiding force, giving him all the information available and designating what it is desired to accomplish, being careful to designate one or more minor objects in case it is found to be impossible to carry out the main mission. This in order that the movement may not have the appearance of being a total failure. It is hardly necessary to say that secrecy at this stage is imperative.

The size of the force must be in proportion to the expected resistance. The larger the force the stronger its offensive power and the quicker and more effectively can it carry out the work assigned, but a large force cannot move as rapidly or as secretly as a small one. The number must therefore be a

compromise and should never be more than absolutely necessary.

Artillery as a rule accompanies such an expedition, the number of guns being in proportion to the size of the command, and would probably vary between a battalion and a battery. All carriages should be double teamed. Mountain artillery might in some cases be preferable to horse artillery.

The best organizations are selected and the men are examined by the doctors and the animals by the veterinarians and only the physically fit are taken.

Ammunition and rations are carried on the saddle, if the country is barren of supplies a pack train is taken.

A certain amount of high explosives should constitute part of the equipment of every raiding force.

The command would also be accompanied by a small sanitary personnel, one or two expert telegraphers and probably a wireless section.

The route followed should be the one that offers best concealment, consistent with a rapid advance. These two requirements naturally conflict and as a rule the first few marches should be made for concealment even at the expense of distance.

The march should be in one column with only such detachments as are necessary to gain information and deceive the enemy.

Night marches should be the rule and when danger is most imminent the command should be in the saddle before day break.

The knowledge of the country will necessarily depend on the conditions but in any case it should be made as thorough as circumstances will permit and no effort should be spared to obtain trusted guides and to find out the location and strength of the enemy.

The rate of march will depend on the distance, the roads and chiefly on the horse supply of the country invaded.

Combat should in general be avoided, the commander must always bear in mind that success depends on secrecy and rapidity of movement and should he delay to pick up scattered detachments of the enemy he will find the road blocked to his main objective.

Every possible ruse should be employed to draw the enemys attention from the point of attack and cause him to disperse his forces.

If practicable a different route is taken for the return.

Finally, it may be said, that each particular raid will present a distinct problem, that the course which appears to be most dangerous will as often as not prove to be safest. Success depends upon the good judgment, nerve and luck of the leader.

THE RELATION OF PROMOTION TO ORGANIZATION.

BY CAPTAIN GEO. VAN HORN MOSLEY, GENERAL STAFF.

PLEASE permit me to correct the impression conveyed on page 172 of the July, 1912, issue of the CAVALRY JOURNAL where you state that:

We have been told that the committee of the general staff that has been working on a reorganization scheme for the army was about to submit its report and that the same would soon be laid before Congress. Rumor has it that this long delay in submitting this report has been caused by a failure to reach an agreement as to how the resulting promotion that would follow the reorganization should be apportioned. If such is the case or in any case, the adoption of this principle of one list for promotion would have settled that question and have paved the way for a fair and free discussion of any reorganization scheme upon its own merit.

The committee of the General Staff which was directed to draw up the reorganization plan realized at the very outset that little could be accomplished until the questions of promotion involved were separated from the questions of organization.

Over a year ago a committee of the General Staff was ordered to investigate the advisability of putting all line officers of mobile troops on one list for promotion. The members of this committee were generally in full accord with the idea, but the practical application of the straight one list principle was found to present difficulties impossible to overcome with justice to all concerned. The reorganization committee, therefore, sought a modification of the straight one list plan which could be applied practically.

Inclosed is a copy of that part of the committee's report which deals with the relation of promotion to organization. It was accepted very soon after the committee began its labors. At no time during the work of the committee has the question of promotion affected in the slightest degree, the recommendations made or the decisions arrived at.

During one of the recent hearings which the Secretary of War held on this report, this question of promotion was thoroughly discussed and the proposition submitted by the committee was not seriously questioned.

The statement made by a member of the committee at this hearing is important as bearing directly on this subject. I therefore quote it in part:

The proposed policy outlined in Chapter No. 7 is recommended in order to separate questions of promotion from questions of organization. In fact, the committee believe that there is little hope of arriving at a sound solution of the many questions of organization which now confront us, without separating the question of promotion from the question of organization.

In this report the committee has attempted to do the best it could with the organizations now in the military establishment, indicating where deficiencies exist, so that when Congress might be ready to legislate for the army it could make its legislation fit into a definite plan. Thus, it will be seen when we have completed our review of this report, that we have outlined a building policy covering a term of years.

It is unfortunate that conflicting interests between the different arms have in the past, brought conflicting evidence before Congress as to the merits of proposed legislation for an increase of parts of the army. Even some General Staff officers find it almost impossible to view questions in their broadest sense if the arm to which they belong is in any way affected. If the policy recommended in this report should be incorporated into law, the officers of the Infantry, Cavalry and Field Artillery would have their interests united, for any legislation aiding one of these arms would aid the others in proportion.

Some reorganization schemes that have been proposed in the past have granted a slice of promotion to every arm and corps. While a few officers in the army might favor such plans, they are generally unsound tactically and it is believed they would receive very little serious consideration in the hands of the military committees.

There are a number of indirect advantages in the promotion plan here proposed.

It partially solves the question of relative promotion in the three arms.

It will give the Government an opportunity to educate officers in the three arms which have to fight side by side.

After such a policy has been in force some time, we would have officers who have had actual service in two or more arms. Eventually, General Officers can be selected from field officers who understand the tactical handling of each of the three arms, and the three arms combined.

Foreign governments realize the necessity of training officers in the tactical employment of each of the three arms, and they assign selected officers to other arms than their own in order that they may receive this training.

It has been stated that this policy would not work practically for an increase in the regular army at the outbreak of war. Deficiencies in the military establishment at such a time should be made good by the organization of volunteer units, under such a bill as the Dupont bill. It must be remem-

bered also that after this policy had been in effect several years we would have a number of officers who would have had actual service in at least two arms, so that new organizations of any arm could be organized in the regular army and the more important positions of command be filled by officers who had had actual service in the particular arm being increased. Such a new organization would not be available for service at the front in less than four to six months, in which time the commissioned personnel would have adjusted themselves to their duties.

There is no use of talking about drafting reorganization bills until all minds are agreed upon some of the broad fundamental principles of organization. Much good will eventually come from the discussions which have taken place during the winter in Congress and in the Military Committees, for the military needs of the country are now more clearly and more generally understood. All concerned are working for efficiency, but unfortunately there has been conflicting views as to just what is necessary to secure it, and just what should be done to put our whole military establishment, both regulars and citizen soldiery, on a proper line of development so that both forces may be able to meet the many national duties which they may be called upon to perform. Many of these questions have been cleared up, and a better understanding of the subjects involved now exists, and there is every hope for the future. But professional officers must remember that sacrifices may be required in peace as well as on the battlefield, and all concerned must stand ready to yield when the interests of the whole army are at stake. Only in this way can Congress be informed of exact conditions and needs in the army, and thus be able to act intelligently on matters of military legislation.

PARTIAL REPORT OF COMMITTEE.

The organization of the army should be determined by strategical, political, and economic considerations, with the sole view of serving the public interest. In the past, however, questions of relative promotion have largely influenced the result. Proper promotion of the officers is essential in any military system, and parity of promotion under similar conditions is necessary if we are to have an effective force. Human nature is such that all officers desire their share of promotion. The result has been, however, that these questions of relative

promotion have affected the proper consideration of all questions of organization. If an effort is made to secure an increase deemed necessary in any one arm, officers of the other arms are liable to oppose it unless by other increases, perhaps necessary and perhaps not, a parity of promotion is received. While, therefore, the question of promotion and rank is one that all officers are rightly interested in, it has interfered, and will continue to interfere, with any scientific and economical reorganization plans. It is therefore, considered an absolutely necessary preliminary to any reorganization of the mobile army to place promotion on an equitable basis independent of organization.

In order to accomplish this result in the simplest and most equitable manner, and with a minimum disturbance of existing conditions, it is suggested that the following rules governing rank and promotion should be incorporated in the military law of the United States.

1. Rank and command in any grade of the army below that of brigadier general shall be determined by length of continuous commissioned service as an officer of the Regular Army. The date of commencement of continuous service shall be known as the "date of precedence." In all grades below that of brigadier general all officers of the Regular Army shall be arranged in the order of their dates of precedence, and those appointed on the same date in the order of their appointments: *Provided*, That the Secretary of War shall assign constructive dates of precedence to all officers of the following classes who occupy anomalous positions on the lineal lists of their several arms.

(a) Those officers of Cavalry, Field Artillery, Coast Artillery and Infantry who were appointed under the act of February 2, 1901, and who had served as commissioned officers in the Regular Army or Volunteers prior to such appointment.

(b) Those officers who have lost rank by reason of the sentence of court-martial or as the result of examination for promotion.

(c) Those officers who have voluntarily transferred from one arm of the line to another or from a staff department to an arm of the line.

Each officer of class (a) above excepted shall be assigned a constructive date of precedence which will place him in the same position relative to officers of his own arm or corps as he now occupies on the lineal list of his arm or corps, and with reference to officers of other arms or corps whose dates of precedence may lie between that of the officer next above him and the officer next below him in his own arm or corps, he shall take precedence in accordance with total length of commissioned service in the Regular Army and Volunteers, and his constructive date of precedence shall be fixed accordingly.

Each officer of class (b) and (c) above excepted shall be assigned a constructive date of precedence which will place his position for rank and command next below the officer who immediately precedes him on the lineal list of his own arm or corps on the date of the passage of the act.

2. The order of promotion in each arm, department or corps shall remain as now provided by law, subject to the exception described in paragraph 3, below, which applies to original vacancies in the Cavalry, Field Artillery and Infantry.

3. Whenever any part of the Infantry, Cavalry or Field Artillery is increased or the number of officers in any of these arms is increased the original vacancies above the grade of second lieutenant due to the increase shall be filled from the next lower grade in the three arms, the number of officers promoted from each arm to be proportional to the number of officers of that grade in the three arms; *Provided*, That the order of promotion in any arm shall be in the order of the lineal list of that arm, as now provided by law; *Provided further*, That, so far as practicable, officers shall be promoted in their own arm; *Provided further*, That when an officer is nominated for promotion into an arm other than his own he may waive such promotion, and in this case the vacancy shall pass consecutively to the officers next below him in the lineal list of his own arm; *And provided also*, That whenever an officer is promoted to another arm under the provisions of this rule his position for subsequent promotion in that arm shall be fixed by his position on the list for rank and command as determined by the date of precedence defined in paragraph 1 above.

4. Whenever any part of the Infantry, Cavalry or Field Artillery is reduced or the total number of officers in one or

more of the three arms is reduced the surplus officers should not be absorbed in the arm or arms in which the reduction occurs, but should be prorated for absorption throughout the three arms; *Provided*, That whenever any officer is transferred to another arm under the provisions of this rule his lineal position for promotion in that arm shall be fixed by his position on the list for rank and command as determined by the date of precedence defined in paragraph 1 above.

COMMENTS ON THE PROPOSED RULES FOR RELATIVE RANK AND PROMOTION.

Rule 1.—This rule does not affect promotion in any way, but provides that all officers shall take precedence in their respective grades in the order of their actual seniority, and not according to the date of last commission. On July 23, last, Captain W——. of the Cavalry, was promoted to the grade of major after twenty-three years, one month and twelve days of commissioned service. Major W——. is junior in rank to Major R——. of the Medical Corps, who, on the date of Major W——'s promotion, had served nine years, eight months and twenty-three days. Major R——'s seniority is based on the fact that his commission as major antedates that of Maj. W—— by nine days, and this notwithstanding the fact that Major W——. had served as a commissioned officer more than twice as long as Major R——. The proposed rule would not expedite Major W——'s promotion, nor would it retard that of Major R——. It would simply provide that after arriving at the same grade their precedence should depend upon actual seniority. Major R——'s rapid promotion has been due to special provisions of law, under which medical officers enter the Army with the rank of first lieutenant and are promoted to the grade of captain in five years after first commission. (The period is now three years.) These provisions are designed to compensate for the fact that such officers must acquire a special professional education before they can enter the Army. The proposed rule for relative rank would not interfere with such special rules of promotion, but would simply provide that after arriving in the same grade officers should take precedence in the order of actual seniority.

Among Major W——'s seniors under the present rule of precedence is Major C——, of the Coast Artillery, whose seniority is based on the fact that he was promoted to the grade of major sixteen days before Major W——'s promotion, notwithstanding the fact that he was actually Major W——'s junior as a commissioned officer by nine years.

The difference in length of service in this case is due to the fact that under present conditions promotion in the cavalry is relatively slow, while promotion in the Coast Artillery is relatively rapid. The proposed rule of seniority would not affect promotion in either arm, but would simply tend to adjust relative rank on an equitable basis when officers arrive in the same grade. Relative rank determines the right to command the right to choice of quarters, and precedence on boards and other duty, where officers of the different arms are required to serve together. Among officers in the same grade seniority for the purposes above indicated should be determined by actual seniority.

Rule 3.—This rule applies only to Cavalry, Infantry and Field Artillery. These are the combatant arms of the mobile army, and the rule is proposed in order to eliminate all questions of individual promotion from the problem of reorganization of the mobile army. With this rule in effect it is expected that questions of legislation affecting the mobile army can be considered purely on their merits from the standpoint of the public interest.

NOTES ON THE NEW RUSSIAN CAVALRY DRILL REGULATIONS.

BY CAPTAIN N. K. AVERILL, U. S. CAVALRY, MILITARY ATTACHÉ.

EARLY in 1912 appeared the new Cavalry Drill Regulations for the Russian cavalry, a work involving several years of preparation, based on their experiences in the Russo-Japanese War, and having many new features.

As this new Russian Cavalry Drill represents the latest thought and opinion of the largest cavalry in the world on purely cavalry work, some notes on the same, indicating the main points of differences between their work and ours may be of interest. Such a review will have to be covered by sections, and for this paper I have taken the preliminary introduction and the subject of command.

FOREWORD.

"The Cavalry Drill Regulations, while giving instructions for the field service of the cavalry and indicating the proper formations and movements to be used in different cases, demand, nevertheless, that cavalry commanders pay special attention to the bequest of our great Emperor Peter I—'Not to hold to the letter of the regulations, like a blind man to a wall.'"

These general instructions are further emphasized in the introduction which states—"Therefore, each cavalry commander is *bound* to conform his actions to the actual conditions, even departing, in necessary cases from the letter of the regulations. Everything not foreseen by the regulations is left to *the initiative of those who execute the action*, therefore the interference of a chief is needed only when the actions of his subordinates are clearly erroneous."

COMMANDS.

The commands are given by voice, personal example, signals, trumpets, whistle, orders and by optical signals.

The use of a trumpet is limited to the chief of a section acting alone.

Important cavalry units are generally governed by orders (not commands). In battle commands can usually be used only in small subdivisions. A commander of a regiment will frequently be obliged to have recourse to orders.

A junior officer commands only his own party, calling it by name or number, and even in these cases signals take the place of commands whenever possible. Commanders of platoons when the squadron is in close order command solely by means of signals.

As can be seen from the above extracts, the first great point of difference in the Russian cavalry work and our own is the silence of the same. Compared with the frequent bel-
lowing of some officers, the trumpet calls repeated at times, the repetition of the command by the junior officers and the general noise of our regimental drill, the first thing that strikes one, seeing a squadron or regimental drill here, is the air of peaceful quiet which prevails, the absence of practically all noise except the horses' hoofs. This is of course due to the use of signals by all, from the colonel down.

SIGNALS.

The following signals are especially noteworthy:

1. The saber held aloft, vertically is a sign of attention.
2. All changes of gaits or direction, halts and abouts are indicated by the personal example of the leader.
4. A pretence of sheathing the saber means for the squadron formation in platoon column; for the regiment, formation in line of columns.
5. Taking off the cap and rapidly lowering it to the right stirrup means dismount.
6. The lowering of the uplifted saber is the signal for execution.

The lack of noise and the use of signals are necessarily correlated, one being the complement of the other. As the Russian signals may be made by personal example, by the saber, by the cap, or in time of campaign, by the arm, it can be seen that all commands are covered by the use of signals either singly or in combination. It is a very pretty sight to see the regiment at work here at a full gallop and never a command.

TRUMPET.

The use of the trumpet must be limited to those cases where other means of issuing commands may be insufficient.

The calls—"Form on Front Echelon," "The Rally," "The Assembly," "The Retreat," are repeated by all the trumpeters in the ranks.

The use of the trumpet being limited to the chief of a section acting alone, and then only when it is impracticable to use other means of command, one rarely hears the trumpet in the drill. The idea seems to be that the trumpet, when used in action, is to indicate some sudden emergency, when all the trumpeters repeat the call.

THE WHISTLE.

The whistle may be used to attract the attention of the men in small commands acting alone. When dismounted the whistle means "cease firing."

ORDERS.

An order must be brief and clear. Orders have to be largely used in battle, when commanding a regiment or larger unit.

The man to whom the order is given (orderly), on receiving the same, must immediately repeat it and after having transmitted it will, on returning to their commander, again repeat the same reporting: "I have transmitted to so-and-so, such-and-such an order."

OPTICAL SIGNALS.

These are given by means of flags, optical instruments or other means and are used when the cavalry is in large

masses, deployed over a large extent of ground, and they may be used especially in dismounted action.

CONCLUSIONS.

The above are the salient points of the introduction and system of giving commands in the new Russian Cavalry Drill, and they are of interest in so far as they differ from our own.

When the time comes, as I believe it surely will, when we adopt a double line formation for mounted work, it will be necessary to change our drill and the ideas in this, the latest of foreign cavalry work by the largest cavalry in the world, will at least be worthy of careful consideration by all our cavalrymen, and especially by the cavalry board entrusted with the drawing up of our new drill regulations.

I would, therefore, in conclusion, invite particular attention to the following: First, the maxim of Peter the Great and the idea emphasized in the introduction: "Not to hold to the letter of the regulations like a blind man to a wall;" second, the silence of the cavalry drill here and the universal use of signals; third, the large use of orders in battle order for a regiment or larger units, and the adoption of a particular manner of sending them verbally.

SECOND PAPER.

THE GAITS.

The gaits of the Russian cavalry are five, the walk, trot, gallop, field gallop and full speed. The ordinary rate of march is five and one-third miles per hour, by alternate walk and trot, each of one verst (one verst equal two-third mile.)

Of the gaits above mentioned two, the walk and the trot, are the same as ours, the gallop is ten and one-half miles per hour, the field gallop is sixteen miles per hour, and the full speed is the limit of the horse.

The main point of difference is, therefore, the division of the gallop into three classes. Of these the first, the ordinary

gallop, is much slower than our own, being really little more than a canter of ten and one-half miles an hour; the second the field gallop, is a full gallop of sixteen miles an hour; the third, is the charging gait.

While the ordinary gallop may seem very slow, and impossible to maintain I have yet to see the first horse here out of gait. While this statement may seem almost incredible, in all the drills at which I have been present, I have not seen a single horse trot when he should be galloping or vice-versa; and this in itself is the best commentary on the Russian system of training horses.

CHANGES OF FORMATION.

The following general rules for changing formation are of interest. "All changes of formation and all movements must be executed in the simplest way so as to secure the quickest possible execution.

"When a unit moves in close order, the chief leads it personally, indicating the direction and the gait by his personal example. He is followed by the leading section to which the others conform their movements.

"When forming line from column and in all changes of formation of the rear units, if the gait be not indicated the formation is executed at an increased gait when marching, and at a trot if at a halt. When forming column from line, if the gait be not indicated, the leading unit, if moving, continues at the same gait, or at a walk from the halt."

These general principles would seem worthy of notice as tending to simplify all questions of gait, and for all ordinary purposes they make any command for the gait unnecessary.

DRESSING.

"A platoon in line acting alone dresses *always* on the center rider who must keep in rear of his commander.

"A squadroon acting alone, in line or in line of columns, dresses on the center; if necessary to dress on a flank this must be indicated in the command; in column of platoons the platoons always dress on the center.

"A regiment acting alone, in line, in mass, or in line of

columns, dresses on the center squadron; if necessary to dress on any other squadron, this is indicated by the command.

"Larger combinations (brigade and above) at a halt dress in place; when moving they follow one of the regiments or brigades indicated by the commanding general.

"The commander of the leading or base unit leads the same in the trace of the senior commander, at the appointed distance or in the direction indicated by him."

MOVEMENT AND HALT.

"The commander of the leading or base unit is answerable for the maintenance of the direction and of a regular and even gait.

"The command of execution '*March*' is given when the gait is to be increased, but is omitted when the gait is to be decreased." For example at a walk to increase the gait the command is "*Trot*"—"March;" but when at a trot to decrease the gait the command is simply "*Walk*."

To halt the command is: "*Squadron (Regiment, Brigade)*" "*Halt*"—"Dress." The command halt is given, according to gait at which moving, at from five to fifty paces from the line where the unit is to halt. From these distances the formation must gradually decrease the gait to a walk and then halt; the offices come up to the line, halt and quickly dress; the formation halts in rear of the line of officers, and at the command "*Dress*" approaches quietly at a walk to its proper distance in rear of the officers and dresses on the center.

The question of alignment is thus seen to be very simple. The dress is always center, unless for some special reason one of the flanks be designated. With the platoon, the platoon commander is always the guide; with a squadron the captain is the guide; with a regiment, the colonel; and the subordinate chiefs keep their proper distances in rear. For an illustration, take a regiment at drill: the colonel leads, at the appointed distance in his rear approximately seventy-five yards come the line of captains, the guides for their squadrons (troops); in rear of the captains come the line of platoon commanders, one of whom leads the base platoon and in his rear comes the center trooper on whom the others dress. In

other words, a command for dressing is almost never heard, the officers are the real guides and not a soldier, the maintenance of direction and gait rest on the officer leading the base unit. The same principle is carried out in halting a command, the officers establishing the line, and but one command is heard for the alignment—"Dress," which is of course made on the center.

CONCLUSIONS.

In the above review the following are of particular interest: first, the use of two gallops a slow and a fast one; second, the general rule that all movements are to be executed in the simplest possible way; third, the general rule that in forming line the gait is always at a trot; if from the halt, or at an increased gait when moving; fourth, the officers are always the guides and the dress center. The simplicity of this fourth point would be especially worthy of adoption in our new Cavalry Drill.

THE NEW CAVALRY EQUIPMENT.

BY CAPTAIN EDWARD DAVIS, THIRTEENTH CAVALRY.

THE extracts from the final report of the Cavalry Equipment Board which have thus far appeared in print have been rather fragmentary, have not dwelt sufficiently upon some of the more important articles and have failed somewhat in accuracy. Having been called upon frequently to answer questions about the new equipment, it has occurred to me that the publication of a few photographs with certain accurate comments would be of interest to officers of the mounted service.

It is the hope of many officers that the War Department may yet follow the example of General Sherman who, while Commanding General of the Army, published in General Orders No. 76, 1879, a brief digest of all the recommendations of the Equipment Board of 1878 together with the comment of the Chief of Ordnance, the Quartermaster General, the Commanding General, and the final action of the Secretary of War. Thus the responsibility in each instance was known to the entire service and the atmosphere delightfully cleared. Those who desired to criticise were able to do so not only with vigor but with accuracy.

It is intended in the following pages to present only a general description of some of the more important articles, with brief references to the uses they are intended to serve. It is not desired here to enter into a long statement of reasons or arguments in support of the Board's recommendations, as all of these were presented by the Board to the War Department where, it is assumed, decision will be made with due allowance for the fact that the recommendations of the Board were made after two years of constant work upon this one subject of equipment.

The Board had before it some three or four thousand documents representing the opinions and recommendations of

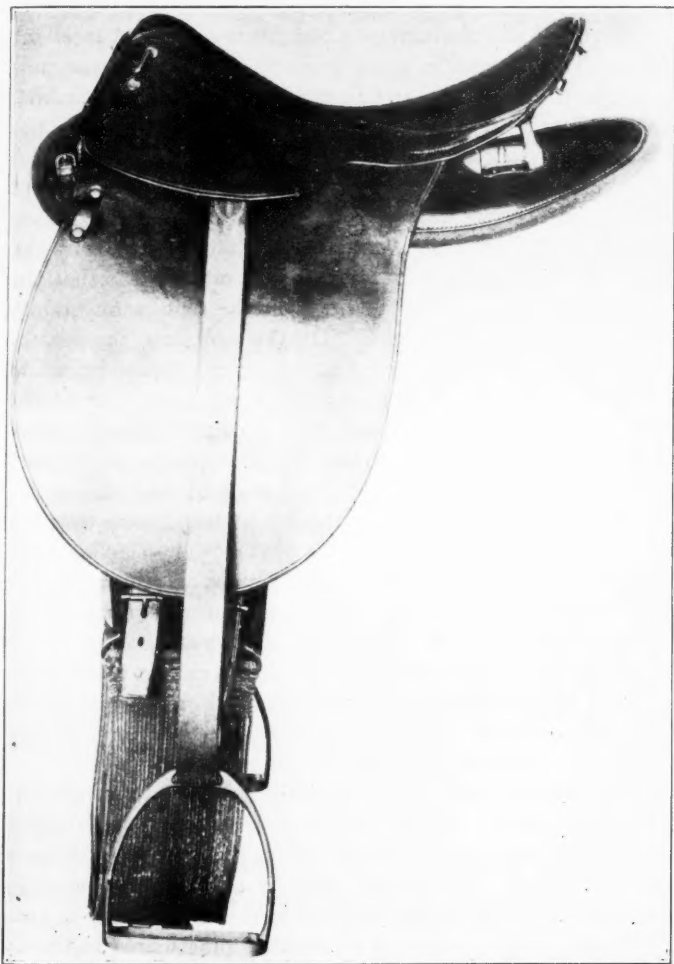
hundreds of officers of the mounted service. It had also, for inspection, the horse equipment of the following nations: Great Britain, Germany, France, Russia, Austria, Italy, Spain, Holland, Denmark, Norway, Sweden, Belgium, Switzerland, Japan and Mexico. Supplementing the Board's advantage in actually inspecting these equipments, were the reports on foreign cavalry equipment, including photographs, drawings, compilations of statistics, etc., provided by the American military attachés at London, Berlin, Paris, St. Petersburg, Vienna, Tokyo, Peking, Buenos Ayres, Chili, and Peru. Further evidence was found in the proceedings of earlier boards on cavalry equipment, notably those of 1884, 1878, 1874, 1872, 1859, 1857 and 1847. These documents constitute the main portion of the recorded history of American cavalry equipment. Consultation was also had with experienced and successful business firms and manufacturing institutions engaged in the production and sale of first-class saddlery and kindred articles. These men of commerce, were as a rule quite eager to meet the governments representatives more than half way and gave many very valuable suggestions. In its actual work of design and development of equipment, the Board had at its disposal the resources of the personnel and plant of the Rock Island Arsenal and the active and generous support of the Chief of Ordnance.

THE SADDLE.

As was anticipated, this article with the possible exception of the rifle carrier, proved to be the most difficult problem before the Board. Without doubt the most interesting feature of this saddle is its adjustability, which is attained by joining the side bars to the bases of the pommel and cantle arches by hinges instead of by the usual rigid joints. In a later paragraph this feature will be discussed with regard to the mechanical side of the question.

The idea of an adjustable saddle is not original with the Board, in fact it is not of recent origin, one having been patented in the United States by W. E. Jones, (sometime Lieutenant U. S. Army) as early as 1856. This Jones saddle failed through the mechanical insufficiencies of the period and the impractical feature of hinges at the top of the pommel and

cantle arches as well as the base. For some years there has been a Netherland and Austrian and a Russian adjustable saddle, while Great Britain has a 1911 model of this type. Cap-



CUT No. 1.—SERVICE SADDLE.

tain H. A. Sievert Ninth Cavalry, U. S. A., a'so has developed a saddle with hinged bars. It is evident that there is now a general movement among the various nations towards the use

of a military saddle tree with lateral adjustability obtained by hinged side bars.

The Seat and General Features—Cut 1.

One sees in the photograph a composite of several excellent saddles. The pommel is possibly more like the German saddle, the cantle resembles the French officer's military saddle, while the dip or curve of the seat is very much like that of the British service saddle. This dip, however, was so shaped and the stirrup loops so located as to enable the rider to most easily assume the seat which is now being taught at the Mounted Service School, Fort Riley. The cantle hinge is rather noticeable in the photograph. Doubtless some officers fear that the hinge feature of this tree will result in the seat being unduly raised above the horse's back. On the contrary, the seat of this saddle at its lowest point is, by actual measurement of new saddles, one-half inch nearer the horse than that of the French officer's saddle ordinarily seen at the Mounted Service School. Under the seat, shown in the photograph, is a ground seat of sole leather and under this two strips of the best English straining web, all being supported by a steel frame which is shown in a later photograph—Cut No. 3. The side bars are seen to project well to the rear. This gives an ample support for the cantle pack and the bars are turned up sufficiently on the end to prevent their boring into the horse's back. There is a metal cantle pack support, not shown in the photograph because it is folded back under the saddle. For field purposes it would be extended and for ordinary use folded back out of sight and kept up off the horse's back by its strap.

The skirt is made rather wide from front to rear so as to afford ample protection, and its length is gauged so as to avoid undesirable contact of upper edge of legging or boot with lower edge of the skirt. The stirrup strap is one and three-eighths inches wide and the leather reduced in thickness as far as considered wise. The buckle is as small as practicable and is assembled to the strap so that the latter hangs with the flesh side out, a measure which adds to the life of the leather.

The stirrup is that now used by the field artillery, being of nickel steel with the sanded oxidized dark finish. Polishing

this stirrup should be prohibited. To clean, merely wipe with an oiled rag. The steel stirrup permits better horsemanship and more comfortable riding, lasts longer, has less bulk, weighs less, costs less, and looks better than the present issue stirrup or any other similar type of hooded stirrup.

The Board realized that the elimination of the hooded stirrup would cause much adverse criticism on the part of a considerable number of excellent officers who are tenacious in their support of this article. These officers desire a hood as a protection against thorny brush and extremes of heat, cold and rain, and they are correct in asserting that the hood does protect against such conditions. The desired protection, however, is more appropriately and just as fully gained by suitable wearing apparel, while the stirrup ought to serve a fixed and independent purpose, *i. e.*, as an aid to horsemanship. Such use is not properly attained by the present service stirrup.

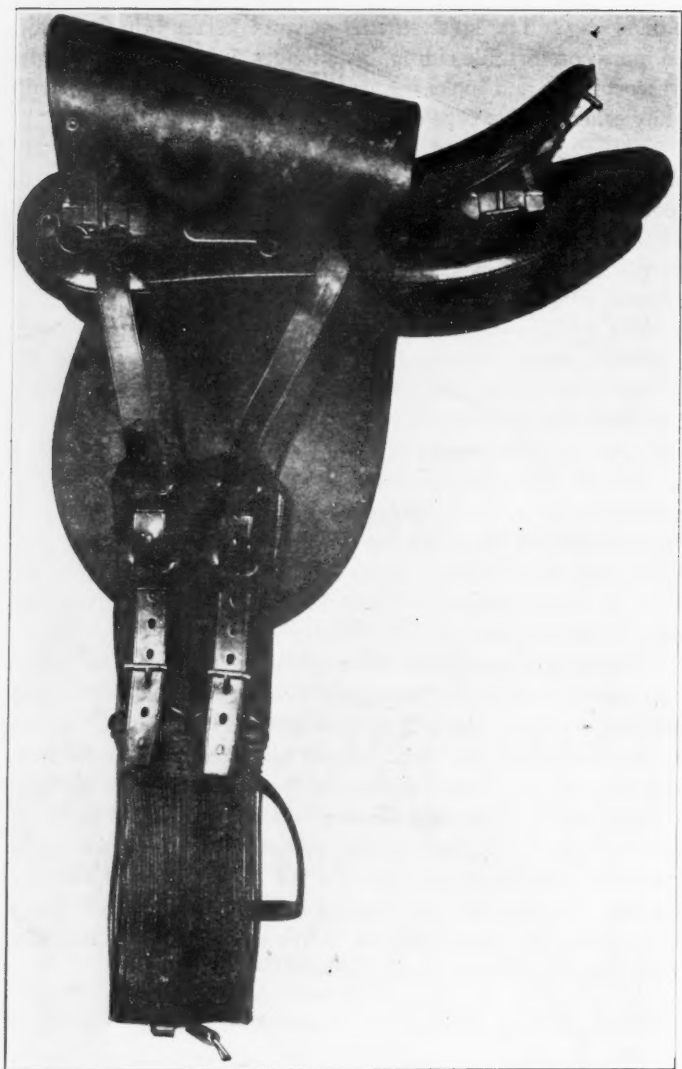
The Board is convinced that the new stirrup will win its own way and need not be supported by words when once it is put into general use. As the effort to remove the hood from the stirrup dates as far back as 1868 and was favorably endorsed by the Equipment Board 1878, it will be admitted that there is nothing new or radical in this idea.

The foot staple which is seen on the pommel and the leather loop which appears on the upper forward corner of the skirt are used to secure the pommel pockets to the saddle. It will be observed that the foot staples used on this saddle have smooth sounded corners instead of sharp corners as at present.

The seat, jockey and skirts of this saddle are to be of imitation pigskin. Including stirrups, stirrup straps, coat straps and girth, this saddle weighs 2 lbs. 14 oz. more than the McClellan. This excess will be about neutralized if the hair pad is adopted in place of the present saddle blanket, the latter being about 2 lbs. heavier than the former.

Felt Pads, Stirrup Loops, Girth, Girth Attachments. Cut No. 2.

Under each side bar and attached thereto by leather pockets, the board has placed a felt pad one-half inch in thickness. These felt pads serve the following purposes: 1. Create friction to help keep the saddle in place without tight cinching.



CUT No. 2--SERVICE SADDLE.

(Showing girth, girth attachment, girth adjuster and stirrup strap loop.)

2. By cushion effect, assist in relieving the horse from the jolts and jars of the weight of the rider and equipment. 3. Can be cut away at some point or points and built up at others by inserting any appropriate and convenient material between the pad and the bar, thus facilitating a cure for cuts, wounds or sores while on the march. The pad is sufficiently inexpensive to warrant this. 4. Gives the saddle a certain degree of longitudinal adjustability by equalizing small irregularities and by reason of the possibility of cutting away and filling in when extremes of longitudinal conformation are encountered.

These felt pads are not experimental. The cavalry of several nations use them and they have been urgently recommended by officers of our army. Felt is preferable to the leather or cloth covered padding sometimes used, because it is less expensive and easier to keep in good condition and correct form.

In this connection it is instructive to note that the saddle from which General McClellan almost certainly patterned his model, was fitted with cork strips under the side bars so that a certain degree of lateral adjustability or a variety of fits was possible. With regard to the use of these strips of cork, General McClellan remarked "The most important feature of this saddle is the manner of arranging it so that a single size may be used for all horses, or for the same horse when their condition changes." The reason for the apparent omission of these pads in the original design of the McClellan saddle and the neglect of the principle thereafter is not of record.

The photograph shows a stirrup bar of the safety loop pattern. The stirrup loop is placed so that the stirrup will hang in the position which is recommended by our leading instructors in equitation, viz.: Well under the rider.

The convenience of this safety loop as a means of removing the stirrup from the saddle for ordinary purposes is probably a more useful feature than is the provision for safety itself. A special feature is the ring on the end of the safety gate. A thong may be tied into this ring to facilitate opening the gate.

The girth consists of thirty-five strands of cotton, braided, sash cord, olive drab in color, and finished at the ends with two buckles so designed that they carry the cord direct without any

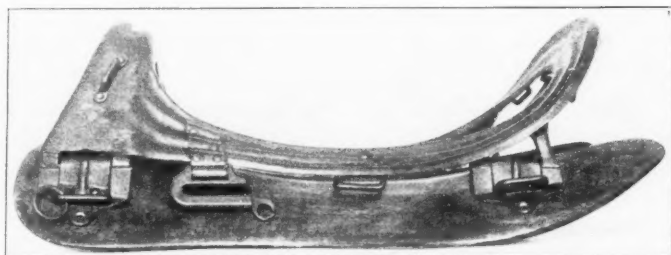
reinforcement or chapes of leather. A swivel buckle in the center of the girth, on the under side, permits the attachment of a strap, by means of which the devices for carrying the rifle and saber are steadied. Three sizes of girths, *i. e.*, 28 in., 32 in. and 36 in., were recommended. This girth holds well, is cool and soft to the horse, and will cost less than the present issue. Experienced dealers and manufacturers state that the trade demand is proof to them that cotton cord is preferable to linen cord.

The girth straps are also shown in Cut No. 2; the front strap attached to the loop on the front hinge, the rear strap attached to the frame itself. The two straps pass through the loops of a leather flap, or girth, adjuster which bears small metal studs by means of which the straps may be fixed at certain points. This permits the girth being adjusted to horses with different shapes of barrel and will also allow the saddle to be moved forward or back as may be necessary. In other words the girth can be carried to the front or rear as desired. This principle was tried out on a number of saddles on a march of 500 miles and gave excellent results. This device appears in a less satisfactory form on the latest model of British army saddle with adjustable bars.

The present quarter strap method of attaching the saddle to the horse unnecessarily constricts his body. The backbone is an elastic column and in proportion as this elasticity is interfered with so is there interference with the horse's balance as he carries his load, and a decrease in the freedom and strength of his strides and leaps as he takes the increased gaits. The quarter strap as attached to the McClellan saddle conveys the grip of the girth to points which are too widely separated and thus encases the horse in a straight jacket which seriously counteracts the elasticity of the backbone by interfering with the horizontal and vertical movements of the elements thereof. To remedy this the Board decided to materially lessen the distance between the points of attachment of the girth straps. This feature is apparent in the photograph.

The Tree.—Cut No. 3.

To carry the seat of this saddle, the Board designed a flanged steel frame, formed by dies to insure economy in manufacture; with a cross section throughout the frame that gives the maximum of strength with a minimum of metal. This metal frame is attached to the wood side bars and is supported by four metal hinges, the two in rear having projecting loops for the sustaining straps of the rifle and saber carriers while the two in front have similar loops for the front girth straps. The hinges are a simplified and strengthened pattern of a type which the Board tried out very thoroughly without developing any structural weakness. The shape of the frame and the height of the hinge are designed to give the necessary clearance



CUT NO. 3.—SERVICE SADDLE TREE.

(Frame of steel with wooden side bars attached by hinges.

above the horse's back without raising the rider further from the horse than is advocated by the best instructors in equitation. The pommel arch, while lower exteriorly than that of the McClellan saddle, is noticeably higher interiorly. It is also of good width thus allowing ample space for the accommodation of the horse's withers.

The metals used in the frame are as follows: The frame proper, flanged steel, copper plated bronze finished; the hinges and their loops, cast bronze, copper plated and bronze finished; the cantle roll support, (see photograph No. 13) sheet brass and steel; girth strap loops, cast bronze, copper plated and bronze finished; stirrup loops drop forged steel, bronze finished; all foot staples cast bronze, bronze finished.

The side bars are to be of clear straight grained, thoroughly seasoned bass-wood. In finishing, the side bars are dipped in raw linseed oil and then given one coat each of orange shellac varnish and spar varnish.

The shape of the side bar was decided upon after a study of plaster casts taken from the backs of live horses, together with an examination of the best features of certain foreign side bars. The length of these side bars is sufficiently great to utilize all the available bearing surface of the horse's back longitudinally. The width of the side bars is such as to best utilize the lateral supporting surface of the back, without approaching too close to the backbone and without interfering with the rider's seat. The interval between the side bars is sufficiently wide to avoid a pressure that would restrict the free movement of the horse's vertebræ at any point.

Adjustability.

Each side bar turns freely on the axis formed by its hinge centers, being checked in its rotation by contact with the steel frame. Thus if the stripped tree is placed on the ground the side bars will rotate to a horizontal plane. So also if the stripped tree is raised and pressure applied on the outside of the bar, it will turn inwardly very close to the vertical, *i. e.*, until it comes in contact with the frame. Thus when the saddle is placed upon the horse's back, the side bars take the same slope as that of the horse's back. There are no pins or screws to hold the side bars at any given angle. All the weight in the seat of the saddle is transmitted to the bars through the hinges. The pull of the girth, of the stirrups, and of the rifle and saber as well as the bearing of the skirts is likewise transmitted either through the hinges or along a line coincident with the axis thereof. This arrangement permits the bars to conform freely to the horse's back.

The lateral adjustability of this tree, as developed along the lines above discussed, has three great advantages, *i. e.*:
1. It will fit any saddle horse, in so far as his lateral proportions are concerned, unless his back be positively deformed. It will be capable, therefore, of almost universal use, though issued in but one size, whereas rigid saddles obtainable in

several sizes still fail to fit many horses. 2. It will continue to fit the back of any one horse when he changes in flesh, as he will with variation in degree of work and condition of nourishment. 3. When, in saddling, the girth is drawn into place the side bars of this saddle move automatically on their hinges, into a position corresponding to the lateral slope of the horse's back. This keeps the saddle perfectly in position and at the same time a degree of motion is permitted the side bars which makes the saddle an elastic burden for the horse, instead of a rigid box or a straight jacket. While this degree of motion is imperceptible to the rider in so far as any movement of his body is concerned, it is a comforting accommodation to the bony and muscular structure of the horse.

The Board is not aware of any well founded disadvantages pertaining to this tree. Structurally it is as strong as necessary, including the hinges and all other parts. Some have claimed that a horse under adverse conditions will lose flesh at the withers in greater proportion than he will along the back where the cantle ends of the side bars rest, and that this will interfere with the fit of the bars, probably producing serious results. The answer is that this has not happened during the Board's very considerable course of experimentation, nor has it happened apparently during the British government's successful tests of 400 trees identical in principle with this one. Furthermore, the premises as to disproportionate loss of flesh, above alleged, are in the nature of suppositions and would, in any event, convey more serious results in the case of the ordinary rigid saddle than they would with an adjustable tree.

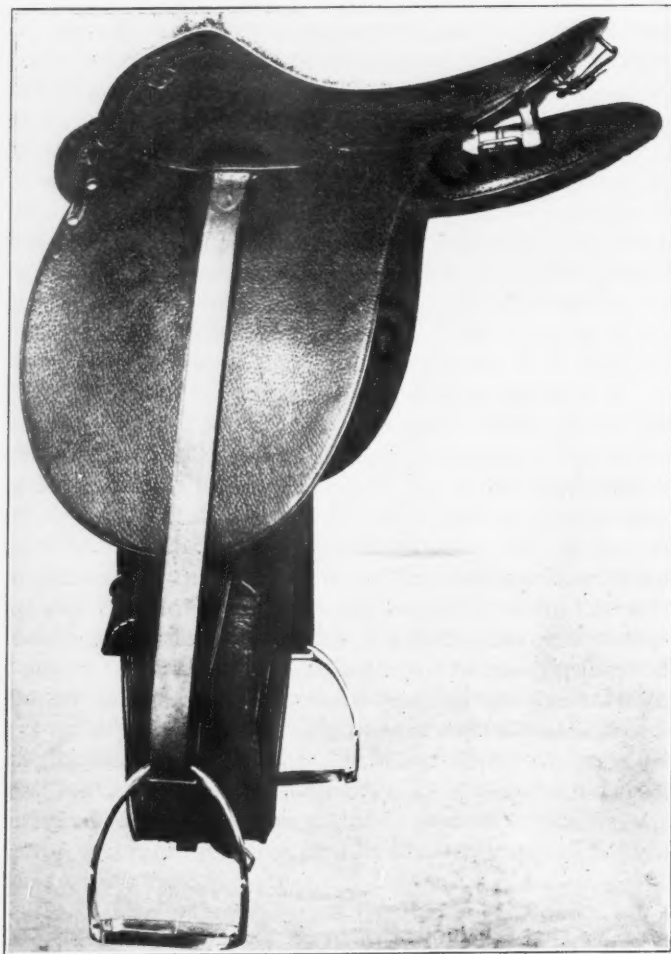
After the British test of 400 saddles, almost identical with this one mechanically, it was authoritatively stated that "this saddle was the best ever issued, in every respect, in the British Army."

Coat Straps.

These are broader and stronger than those now issued and are of the double buckle pattern on the pommel and the single buckle on the cantle. The double buckle strap permits the separate carriage of two distinct packages in one roll. This feature is noticeable in the photograph of the pack saddle. (Cut No. 13.)

Cost of the Saddle.

The McClellan saddle, complete for cavalry, *i. e.*, one tree, sheep skin lined and leather covered, with stirrups, stir-



CUT No. 4.—OFFICER'S SADDLE.

rup straps, cincha and coat straps, is listed in the Ordnance Price List, Revised March 1, 1910, at \$22.40.

The proposed saddle, with the same components as listed above will cost approximately \$21.00, a small saving as compared with the McClellan saddle. The price of the proposed saddle, above stated, is based upon an estimate which was made after careful consideration of the material determined upon and the method of manufacture contemplated

OFFICER'S SADDLE.

Cut No. 4.

This saddle is identical in principle with the service saddle heretofore described and differs from the latter only in the shape of the seat, which is flatter and longer, the shape of the pommel which is slightly cut back, the finish and design of certain minor metal parts and in the use of pigskin in the seat of the saddle. The skirt and jockies are to be imitation pig skin. The stirrups are the same as those on the service saddle, but they are of the bright finish instead of the sanded oxidized dark finish.

The shape of the seat and the hang of the stirrups were determined upon after consultation with Captain W. C. Short, Captain Guy V. Henry, and other instructors in the Mounted Service School. In addition to the features of the seat which were deemed correct by the members of the Board and by the officers consulted, certain advantages pertaining to several foreign saddles of the flatter type, were incorporated.

The estimated cost of this saddle, including stirrups, stirrup straps, coat straps and girth is about \$25.00.

THE BRIDLE.

Cut No. 5.

The proposed bridle is of the combination halter-bridle type and is intended to supplant the present bridle, halter and watering bridle. It weighs complete, five pounds and four ounces, while the articles which it is intended to supplant weigh eight pounds and eleven ounces. The bit and bridoon make this bridle suitable for the refinements of horse training and horse control, while at the same time the arrangement and attachment of the bits are such that it can be used with the curb bit only or with the snaffle only when so desired. The

bits are readily removed when unbridling, or for watering and grazing purposes, and are as readily replaced.

Other features of this bridle may be summarized as follows:

1. Headstall permitting ready adjustment to secure good fit for heads of different sizes.
2. Noseband transferring pull on



CUT No. 5.—THE HALTER BRIDLE.

halter rope to horse's nose with consequent pinching effect.

3. Bit and bridoon straps permitting adjustment of bits to correct position for different sizes of head and allowing bit and bridoon to be readily attached and detached.
4. Reins lighter and more pliable than at present, with buckle on bridoon rein and sliding loop on bit rein. Bridoon rein heavier and larger

than bit rein and having end expanded to keep it in the buckle loop more securely. 5. Bit and bridoon of non-corrosive metal and the same in all respects as models of 1909, except that the branches of the bit are increased slightly in thickness at the mouthpiece, tapering from this point to the ends of the upper and lower branches so as to preserve present form. This additional strength is deemed necessary. 6. Curb chain increased in strength to approximately 1,500 pounds pull and made in single mesh instead of double as at present. Chain permanently attached to bit on the off side. Hook on near side only. This will prevent the numerous losses of chains now observed in the service. 7. All buckles have rounded corners and are as small as practicable. Studs substituted for buckles in attaching reins and bridoon straps to bits. 8. Halter tie of black rope and attached to halter by snap hook. Length over all 100 inches. A paraffin treatment gives pliability and water proof quality.

The black rope halter tie is more serviceable, possesses greater strength and presents a better appearance than a leather tie. The length of 100 inches is advantageous and, furthermore, is necessary in order that the free end may be fastened around the horse's neck and secured near the breast with a roll and stop instead of being tied to the saddle, a method rendered impracticable by the position of the pommel pockets on the new saddle. It is not feasible to provide leather halter straps of this length without splicing. Halter ropes can be reblacked, when necessary by troops.

The link is omitted because it is unnecessary. When troops dismount to fight on foot, horses should be linked by passing bridoon rein through the halter ring of the adjacent horse and securing it by slip knot as now authorized by Cavalry Drill Regulations.

Small detachments of two to ten men, and larger bodies at times, can secure their horses advantageously by "coupling" them, as this eliminates the necessity of horse holders. (Photograph No. 16). The horses can only circle around when their heads are thus tied by the reins, using a slip knot. and securing to far side of cantel of the other troopers saddle.

While this bridle is intended to be used as a halter in the field, it is not to be so used in the stable and corrals in garrison, but should be kept by the trooper, to whom issued, with the rest of his equipment. A web stable-halter has been provided for stable and corral use in garrison. The halter-bridle can thus be kept very presentable and one of the objections to the present halter eliminated.

All the various objections which are urged, by some, against the bit and bridoon, the double rein, and the halter bridle combination were investigated and very carefully weighed by the Board before arriving at a decision to adopt the halter-bridle here presented.

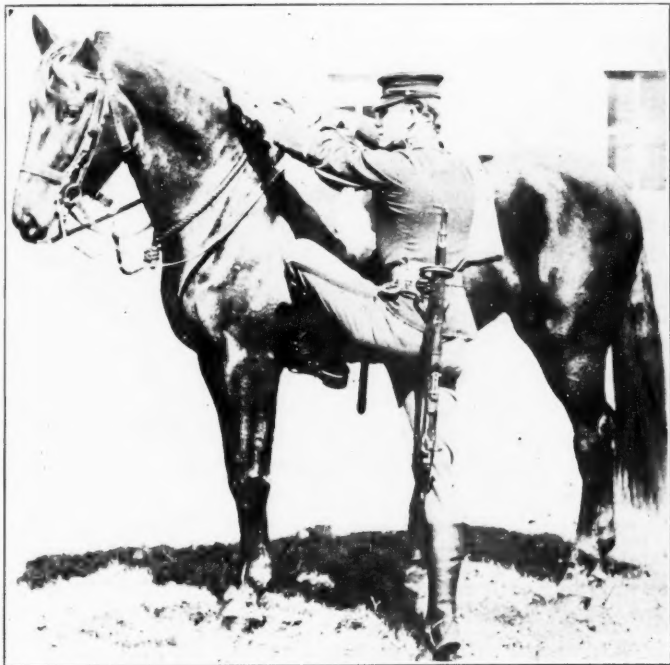
THE RIFLE CARRIER.

Cuts No. 6 and 12.

It will be observed that when the trooper is mounted, Cut No. 12, the butt of his rifle rests in a boot on the rear side; this boot being of leather and attached to the saddle by a strap which passes through a metal loop which is a part of the near cantle hinge. The weight of the rifle is supported by this boot, not by the soldier. A thick felt pad in the bottom of the boot helps to dissipate the jar of the rifle and two flat side-springs grasp the stock sufficiently to keep it from jumping up and down in the boot. The boot can be raised or lowered when necessary to obtain the proper adjustment for men and horses of different size and conformation. The boot is kept from shifting and flopping by a strap device which buckles into the girth. The breech mechanism of the rifle is kept from rubbing the corona or pad by the standing part of the carrier.

From the trooper's belt—Cut 6, projects a leather lined steel ring through which the muzzle of the rifle passes, the latter being thus checked in its lateral motion or wobbling at this point. The ring is collapsible and can be folded down flat against the trooper's body when not in use. The leather lining of the ring protects the hand guard of the rifle from injury, being aided in its function by a leather stock cover which also causes the rifle to play smoothly up and down through the ring. This stock cover does not interfere with aiming nor has it any other disadvantages. It is readily removed if so desired.

From the lower edge of the cartridge belt, under the ring, a leather strap passes downward, terminating in a snap which engaged the trigger guard. This strap supports the rifle when the trooper is dismounted; the ring, above mentioned, keeping the piece nearly vertical. (Photograph 6.) By this method of carrying the rifle mounted, the piece is so secure and undis-



CUT NO. 6.—PREPARE TO MOUNT.

turbed in its position that one at first has the sensation that his rifle has disappeared, and turns to assure himself that it is still there. In mounting and dismounting the trooper practically disregards his rifle. It follows his movements.

As shown in Cut No. 6, at "Prepare to Mount," the trooper with the new rifle carrier simply steps back and assumes the position now prescribed, paying no attention to his rifle. At

"Mount," the trooper rises to his saddle and the rifle follows him. As he settles himself in the saddle, he grasps his rifle with the left hand just above the bolt and inserts the butt into the boot, possibly carrying back the left foot at times to steady the boot. At "Prepare to Dismount," the trooper, with his left hand, grasps the rifle just above the bolt and with a sharp pull lifts the rifle out of the boot. He then dismounts, as now prescribed except that, after his right leg clears the horse, he places his right foot against his left foot standing momentarily with his left foot still in the stirrup. After hesitating slightly in this position, it will be found that the rifle has steadied itself by the trooper's side and does not flop or bang about, as the trooper descends to the ground.

This method involves no loss of time as compared with the present system of pulling the rifle out of the boot after dismounting and reversing this process before mounting, while it is decidedly superior in that the trooper has his rifle with him at all times, no matter how suddenly or unexpectedly he may be separated from his horse. It also removes the rifle from under the trooper's leg where the large bunch makes good riding very difficult. Furthermore, it is believed that the proposed method will considerably reduce the number of sore backs which are now attributed, by many, to the wobbling and jumping of the rifle as now carried. Under the most favorable circumstances the present rifle scabbard permits the rifle to sway and bang about most objectionably. There is nothing about the new carrier which will injure either the front or rear sight or the sight cover.

Experience with the proposed method has shown that the soldier can walk about and do various sorts of work while still carrying the rifle attached to his person. By this it is not meant that he will march any distance with the rifle thus attached, but he can saddle and unsaddle, move about the horse, carry water or forage short distances, etc.

With this method of carrying the rifle, the position of "advance rifle" can not readily be taken. This position is not deemed important as our troopers are not instructed to fire from the saddle.

This rifle carrier includes a safety device which will operate in case the trooper falls off in a limp condition to the near side; for instance, when wounded or stunned. It has been found in



CUT NO. 7.—TROOPER MOUNTED.

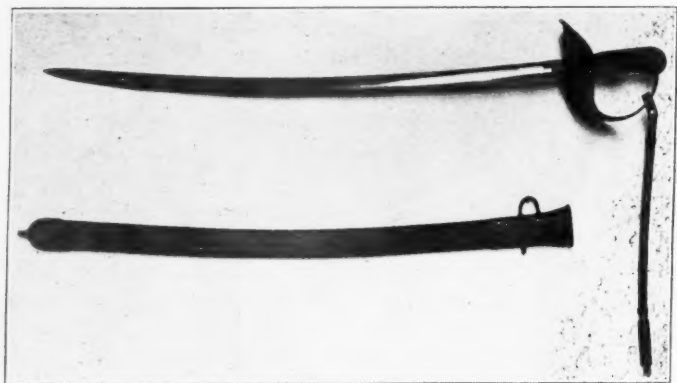
(Showing saber and saber carrier.)

practice and is apparent from the photograph that when the trooper falls from his horse in any other direction or under other circumstances, as when a horse is bucking, the upward course of the trooper's body will pull the rifle out of the boot.

THE SABER.

Cuts No. 7 and 8.

The saber designed by the Board is a cut and thrust weapon, being about thirty-eight inches long, overall, and weighing two pounds. While the opinions of experts in dismounted fencing were considered it was borne in mind that a cavalryman's saber was desired. In endeavoring to produce a saber well adapted to both cutting and thrusting, the Board combined the best qualities found in sabers especially designed for cutting and other sabers especially designed for thrusting. The point of the blade is on the median element thereof, thus favoring accuracy in thrusting, and the blade for some distance back from the



CUT No. 8 — SABER AND SCABBARD.

point is double edged in order to facilitate penetration. It was recommended that this saber be issued sharp and kept in that condition. The steel guard is dark finished, presents an unbroken surface to cuts and thrusts and gives ample protection. The grip is of wood, shaped to the closed hand and covered with shark skin wired down.

This saber is a service weapon and it was recommended that paragraph 1544 A. R., 1910, be amended so that this saber and its scabbard can be drawn by officers from stores as is now the case with the rifle, revolver, etc. It was also recommended that the present officer's saber and scabbard be retained for use in garrison.

Recently, items have appeared in service periodicals mentioning a new saber developed by the Ordnance Department. Inasmuch as the Board's model of saber was worked on by the Ordnance Department for almost two years, it is supposed that the saber recently mentioned in service periodicals is the one recommended by the Board or a slight modification thereof as it is not thought that the Ordnance Department has designed and produced an entirely new saber within the comparatively few weeks which have elapsed since the Board's model was produced.

The Saber Scabbard.—Cuts No. 7 and 8.

The saber scabbard is of wood treated with oil and covered first with raw hide and then with waterproofed olive drab canvas, this canvas covering being woven after the manner of hosepipe covering, the seam being thereby eliminated with consequent gain in wearing quality and appearance. The mouth of the saber scabbard is a dark finished, bell shaped, metal funnel, the opening being two and one-half inches by one and three-eighth inches inside measurement. The opening in the mouth of the present service saber scabbard is one and one-fourth by one-half inches. The increased area in the mouth of the scabbard facilitates returning the saber, and the change in shape combined with the dark finish of the metal gives an acceptable appearance. The dark finished metal tip of the scabbard is drawn down and reduced so that it forms a point which fits into the grommets of the shelter half, the intention being to dispense with the shelter half pole and to use the saber in its scabbard, guard down, as a substitute for the pole.

The Saber Carrier.—Cut No 7.

With a view to removing the saber from its present objectionable position under the trooper's leg in order also to partially counterbalance the weight of the rifle, the Board arranged to suspend the saber carrier from a loop on the offside cantle hinge corresponding to the point of suspension of the rifle carrier on the near side. The saber hangs in two leather loops which are swivel attached to the base-piece of the carrier and permit motion forward and backward in a vertical plane with-

out lateral sway or wobbling. This device permits the saber to swing back easily should its lower tip strike, for instance when a horse takes a jump, and likewise the saber will swing to the front should it be struck by a passing trooper or horse coming from the rear. A stop on the swivel prevents the saber from turning so far that it will fall out of the scabbard.

This saber carrier can be raised or lowered on the horse's side and in this way made adjustable to horses of different height and conformation of girth. At its lower end it buckles into the carrier strap which connects with the rifle carrier on the near side and by its attachment to the girth steadies both rifle and saber carriers. When the rifle carrier is not worn the saber carrier buckles directly to the girth.

Photograph No. 7 shows the saber carrier used in combination with the intrenching tool carrier which is the shovel-shaped pouch seen under the saber scabbard. The picket pin is also shown in this photograph strapped to the outside of the saber scabbard.

By suspending the saber from the cantle on the offside it is nearer the trooper's right hand and can be more readily drawn. It can also be more effectively drawn, with practice, because there need be no disturbance of the bridle hand as is now inevitably the case when the saber is drawn.

SWORDSMANSHIP.

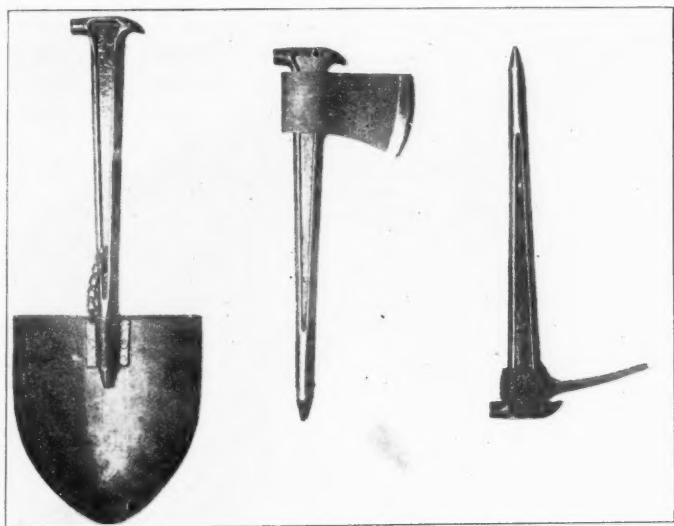
While the Board viewed the proposed saber as a most effective weapon, it also expressed the opinion that an improved saber will be of no great value to our cavalry unless the present condition of instruction in swordsmanship is radically improved. It recommended a scheme by means of which competent instructors can be produced, and suggested that a system of rewards for swordsmanship be established by creating competitions similar to those which now stimulate rifle and pistol practice.

INTRENCHING TOOLS.

Cut No. 9.

After careful consideration of the methods by which American cavalry has gained its greatest successes in the past, and a study of the conditions which will most likely be met in

the future, together with an investigation as to the trend of opinion among other leading nations, the Board took what is deemed by some a radical step, *i. e.*, the recommendation of an individual intrenching tool for cavalry. Photograph No. 9 shows the picket pin assembled as a handle to the shovel, the hatchet and the pick. The shovel weighs one pound, the pick nine ounces, and the hatchet one pound four ounces; an average weight of tool corresponding to the weight of one extra horse-



CUT No. 9.—INTRENCHING TOOLS ASSEMBLED.

(With picket pin for handle.)

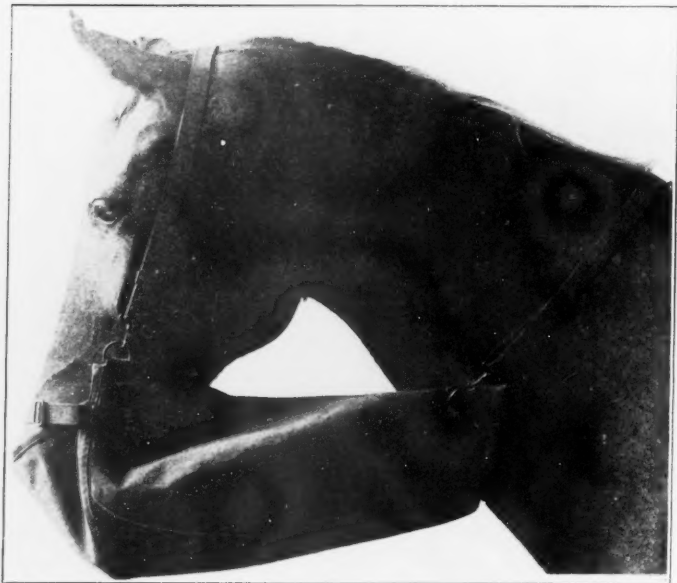
shoe; the Board's recommendation being to carry one extra horseshoe instead of two as at present. This weight is carried on the offside at such a point that it aids in counterbalancing the weight of the rifle. The proposed distribution of the tools is one hatchet to each duty sergeant and three shovels to one pick proportionately throughout the remainder of the troop.

To intrench will be nothing new in the history of the American cavalry; many such instances occurred during the Civil War and later on the plains. In Europe, where a few years

ago even dismounted action by cavalry was held in little favor, rifle fire and individual intrenching tools are now receiving serious consideration.

Intrenching Tool Carrier.—Cut No 7.

This carrier is a stiff, shovel-shaped leather pouch which hangs from the offside of the saddle, being attached to and fitting snugly under the saber carrier. It is detachable and need not be carried should occasion dictate its omission. A pocket in the outer half accommodates the shovel, the pick or the hatchet.



CUT NO. 10.—FEED BAG.

A pocket on the horse side of the pouch accommodates the extra horseshoe and also contains a small leather case carrying ten non-corrosive horseshoe nails. The pouch is securely closed by a flap.

THE FEED BAG.

Cut No. 10.

The old issue nose bag is an expensive article because it permits the horse to waste considerable grain and it wears out

quickly. The waste of grain is also objectionable because the horse is deprived of just that much nourishment and frequently worries and frets and tosses his head in an effort to get at the grain. Insufficient ventilation is another objection to the old nose bag.

The feed bag recommended by the Board, is a canvas cylinder open at one end, but arranged on the horse with its long axis nearly horizontal instead of nearly vertical as is the old nose bag. This spreads the grain over a greater area in the bag and permits the horse's nostrils to have free access to the air. By a strap fastened over the head, the front end is suspended just under the horse's mouth, while a strap passing over the horse's neck brings the rear end of the bag against the neck higher than the front end. The horse simply stands still and eats, the grain gradually shifting to the lowest point. The horse soon realizes that his grain is accessible and becomes comfortable.

When occasion demands, eight to ten pounds of oats can be carried in the feed bag in the shape of a roll on the pommel, but for greater security and convenience an insert sack, called the grain sack, has been made. Photographs 11, 12 and 13 show the feed bag, with its insert grain sack, used as a grain roll on the pommel. The insert grain sack is an elongated cylinder to be made of light unbleached sheeting or of burlap and of dimensions permitting its insertion, full of grain, into the feed bag. Its open end can be securely closed by a cord which is conveniently attached and it is fitted with another cord by means of which the grain can be divided into two parts. It will contain eight pounds ordinarily, but its capacity can be stretched to ten or twelve pounds, depending upon the bulk of the grain. While it is intended as an insert to the feed bag, this latter article can be arranged as heretofore mentioned so that it will carry grain without the insert sack. It will then be possible, if necessity demands, to carry both these sacks filled with grain, one on the cantle and one on the pommel, thus doubling the supply.

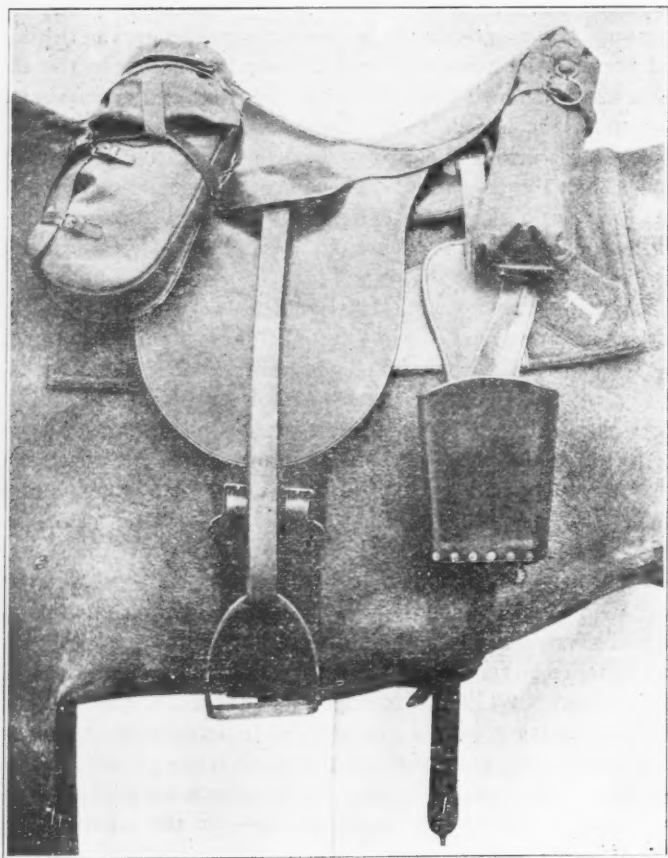
The proposed feed bag makes a good water bucket when such an article is required: thus the trooper even when alone is never without facility for watering his horse as long as the

trooper himself can get down to the water hole or other point inaccessible to the horse.

THE NORMAL EQUIPMENT.

Cuts 11 and 12.

This is the equipment recommended for troops when they are accompanied by field trains, viz.; on ordinary practice



CUT No. 11.—NORMAL EQUIPMENT.

(Showing rifle carrier on near side—saber projecting below on off side—grain on pommel and rain coat on the cantle.)

marches in time of peace and for certain service in time of war. Its weight is seventeen pounds less than the full equipment which is now prescribed for the occasions above mentioned: to be exact, the total weight of all the articles of the Normal Equipment—calculating the weight of the trooper, stripped. at 150 pounds, is 245 pounds and 7 ounces.



Cut No. 12.—PACKED SADDLE WITH NORMAL EQUIPMENT.

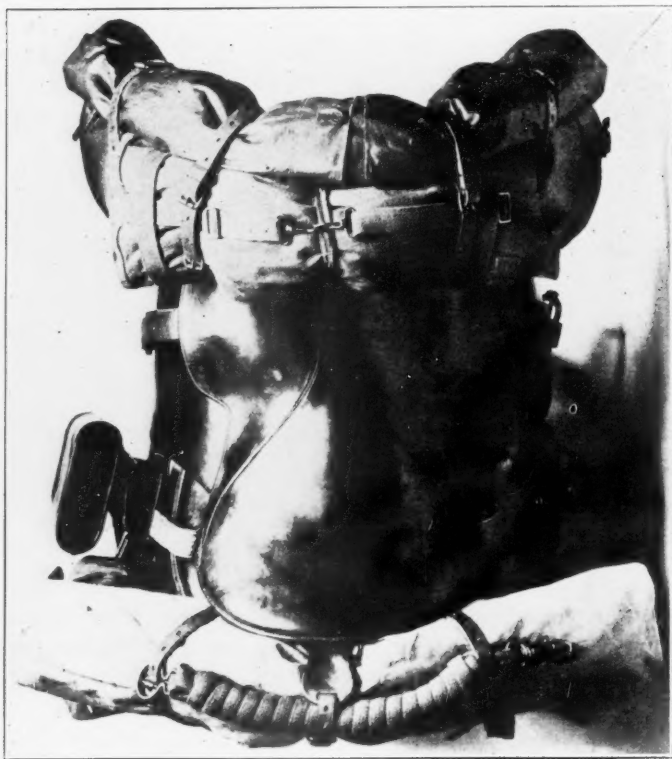
The photograph shows the feed bag, carrying three pounds of grain—noon feeding—on the pommel just above the pommel pockets. These pommel pockets contain the canteen, cup, wire cutters, meat can, knife, fork, spoon, (these articles of the mess kit are enclosed in a canvas pouch which can be removed and washed) horse brush, curry comb, grooming cloth, four ounce can of leather oil, 2 oz. tin of saddle soap, and in winter time ice

calks and extractor; a separate pouch in the pommel pocket also holds a cooling strap which is a substitute for the surcingle. Another compartment will hold the trooper's pipe, tobacco, etc. On the cantle we see the rain coat and lariat. The following articles will be carried in the field train: rations, bed blanket and shelter tent, including the toilet and other articles prescribed for the cantle roll.

FULL EQUIPMENT.

Cut No. 13.

This equipment is intended for use when the troops are on active service and are separated entirely from the field



CUT No. 13.—SADDLE PACKED WITH FULL EQUIPMENT.

(Viewed from above.)

train. It includes all articles prescribed by the Field Service Regulations for all situations.

The photograph shows the full equipment viewed from above. The rain coat is seen strapped in front of and tight up against the grain roll and the pommel pockets. The shelter half is carried on the cantle together with the lariat. Here may be seen in the photograph the cantle roll support previously mentioned. The bed blanket is under the saddle and on top of the saddle pad. Considerable experience has shown that the bed blanket may be carried here without becoming soiled or otherwise rendered objectionable to the trooper.

While the present cavalry pack has served its purpose fairly well, a desire for improvement has long been in evidence, and various rearrangements have been tried out from time to time. However, no combination of the articles of equipment now issued has satisfactorily overcome all the defects of the present pack which are chiefly: 1. Lack of compact and tight assemblage, resulting in flopping, rattling and looseness of parts. 2. Lack of proper weight balance along lateral, longitudinal and vertical lines: the lateral misbalance, probably contributing to sores at the pommel and cantle end of the saddle while the longitudinal and vertical misbalances interfere with the horse's stability in leaping and running. 3. Too heavy, not only as to certain articles themselves but too many articles carried on the horse's back on many occasions when they ought for economy and efficiency be carried in the wagon train. 4. No proper provision for carrying an ample reserve of grain—well balanced on the saddle. 5. No proper provision for carrying rations, mess kit, etc., dismounted when the trooper is required to leave his horse for an appreciable period. 6. Unnecessarily crude in appearance, a man of experience has remarked, with reason, "a trooper with the present full packed saddle looks like a prospector in the early days."

The articles of the proposed equipment have been developed with a view to packing properly on the saddle, as well as serving their separate purposes. It will be seen from an examination of the photographs that there are no loose parts of the proposed pack, Normal or Full, to flop or rattle. Pommel and cantle packs are tightly strapped. Canteen and cup are

stowed away in pommel pockets. The lariat and picket pin are secured out of the way.

The proposed pack as contrasted with the present, brings the center of the pack weight nearer the center of gravity and the center of motion, by reducing the weight proportionately on both pommel and cantle, and increasing the seat load. In addition to this longitudinal correction of balance, a lateral concentration of weight has been effected by placing more weight proportionately along the center line and reducing it along the sides.

The center of gravity has been lowered and weight and bulk effectively distributed by taking the bed blanket out of the cantle roll and placing it under the saddle. It is protected from the sweat of the horse and of the rider's legs by the corona or saddle pad and the saddle skirts respectively. Enlisted men who have tried it state with few exceptions, that they prefer the blanket under the saddle rather than in the cantle roll.

The weight of all the articles of the trooper's equipment as proposed by this Board in the Full Equipment, (262 pounds, 3 ounces, allowing 150 pounds for the trooper stripped) is but eight ounces less than the weight of all the articles of the trooper's equipment as now authorized, but the new equipment includes the following separate additional essentials with their added efficiency: *i. e.*, intrenching tool 1 pound, 1 ounce; picket pin case, 4 ounces; wire cutter, 12 ounces; oil for leather, 5 ounces; saddle soap 2 ounces; grain sack, 3 ounces; bandoleer, 1 pound, 5 ounces (the issued bandoleer is not serviceable for cavalry); bayonet, 14 ounces; (total 4 pounds, 14 ounces.)

Bearing in mind the great importance of the above mentioned articles to the cavalry service, their total weight, 4 pounds, 14 ounces, seems entirely justified. In designing the various articles of the equipment an earnest effort was made to reduce the weight but it was the Board's experience that weight cannot be sacrificed if serviceability is to be expected.

It is not practicable to further reduce the weight of the articles which form the trooper's full pack, if efficiency and durability are to be maintained. It is practicable, however,

to place a part of the pack in the wagon on many occasions. There is sufficient room in the wagon if it is properly loaded. Every effort should be made to preserve the trooper's horse as a charger instead of wasting him as a freighter.

FULL EQUIPMENT, DISMOUNTED.

Cut No. 14.

This equipment is contemplated only for occasions when the trooper dismounts with the expectation of going into action



CUT No. 14.—DISMOUNTED TROOPER WITH FULL EQUIPMENT.

for a period of several days or when he is actually serving as infantry. It is intended for only such unusual service. The ration bags are taken off the saddle and assembled into a knapsack, the meat can, knife, fork and spoon being placed in the rear compartment thereof. The canteen is transferred from the pommel pocket to the belt, hanging therefrom at the right rear just behind the pistol. The intrenching tool, having

been taken from its carrier and assembled to the picket pin handle, is carried suspended from the belt at the left side. The blanket, with or without shelter tent and other contents of the cante roll as occasion may dictate, is rolled and placed contiguous to the top and sides of the knapsack with its ends drawn against the same. The bandoleer is worn under the knapsack. This full equipment, dismounted, weighs, including the clothing on the trooper's person, fifty-six pounds nine ounces. Before going into action, however, the cavalryman, serving as infantry, would further reduce this equipment to a fighting equipment which weighs forty-six pounds, two ounces.

ARMAMENT.

The convening order excepted the rifle and pistol from the Board's consideration, hence no action was taken with regard to the design or style of these weapons. Upon the Board's being asked to express its opinion as to the desirability of discarding the pistol, the majority of the members expressed themselves as being decidedly in favor of retaining that weapon.

The design of the new saber has already been discussed. As to the question of retaining or discarding the saber, the Board assumed the ground that this weapon is the arm "par excellence" when large bodies of cavalry meet large bodies of cavalry in shock action. While many assert that such encounters will be rare it is foolish to say that they never will occur again. We must, therefore, be equipped properly for the inevitable fight of cavalry against cavalry.

The recommendation of a bayonet for cavalry arouses stout opposition in some quarters and cordial approval in others. A considerable proportion of the opposition is undoubtedly due to the fact that the proposal came several years before people were prepared for it, and at a time when an enthusiasm for mobility, pure and simple, had attained a most commendable momentum. This interest and pride in a maximum mobility is one of the best things that has ever happened to our cavalry and it will be found that those who advocate the bayonet are among the most sincere and persistent champions of the renewed interest in the horse. The two ideas are deemed consistent, not antagonistic. Despite theory, the experience of

the Russo-Japanese War proved that artillery and rifle fire alone will often fail to drive troops from trenches. Only the bayonet will oust them. Our cavalry, by its mobility, in the future as in the past, will find prizes within its grasp but possession can no longer be obtained by fire alone. The bayonet will be necessary.

This is a question to which the negative cannot be applied unthinkingly, nor can it be effectively combatted by anonymous and twisted quotations, such as that which appeared in the *Army-Navy Journal*, July 20, 1912. The author of the communication was referred to as an "indignant officer of cavalry" who was opposed to the bayonet and who quoted the Cavalry Equipment Board as saying that "the greatest accomplishments of the American Cavalry have been in scouting on foot." The Board made no such statement. The gentleman was long on indignation and short on information.

LEATHER LEGGINGS.

Cut No. 15.

From the statements of more than 400 cavalry officers and from the clothing records of thirty-five troops of cavalry and three batteries of artillery together with its own experiments of more than a year and a half with leather leggings, the Board gained proof—actual proof not mere opinion—that the leather leggings is decidedly more economical than the canvas, wears longer, less frequently requires replacing, affords better protection and is far handsomer in appearance. The Board did not accept as valid, the objection that the deterioration of leather will render impracticable the storage of a reserve of leather leggings. If a reserve of leather leggings is an absolute essential we should also have a reserve of shoes, saddles, bridles and other articles made chiefly of leather. Such a reserve has not been found impracticable. The leather in the leggings will not deteriorate more rapidly than in the other articles. As a matter of fact the mounted service would be delighted to get this leather legging even though but a few troops and batteries could be outfitted per year. The canvas legging has been well weighed in the balance and found wanting, particularly those issued in years just recently past.

Several reliable firms agreed to make the leather legging at a maximum of \$2.00 per pair and of these offers some were as low as \$1.55 per pair. The material estimated on is collar-leather and the design permits machine stitching virtually throughout.



Cut No. 15.—LEATHER CAVALRY LEGGINGS.

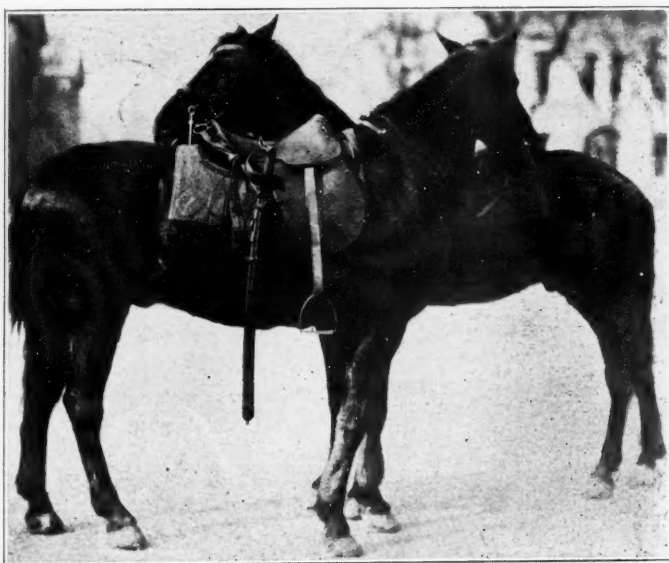
OFFICER'S SABER CARRIER.

Cut No. 17.

This device resembles the proposed saber carrier for the trooper. Two leather strap loops hold the saber. The strap loops are mounted on a metal frame which is swivel attached to the broad depending strap, the latter extending diagonally from cantle hinge to girth center. A saber of the officer's present type is seen in the carrier, but the strap loops are cap-

able of adjustment to receive the service saber which would be carried in exactly the same manner.

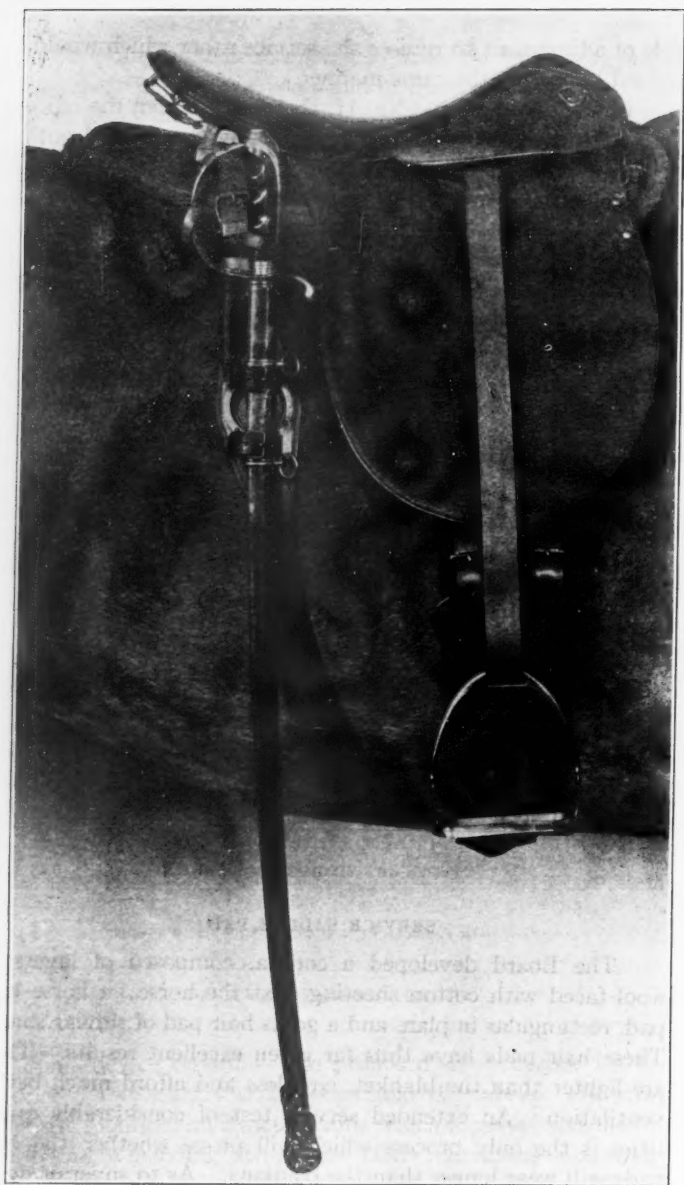
In the photograph—No. 17, there is also seen the officer's hair pad, so shaped that it follows closely the general outline of the bearing surface of the saddle and skirts. The material is horse hair and much is promised in efficiency, durability and appearance.



Cut No. 16.—HORSES COUPLED.

SERVICE SADDLE PAD.

The Board developed a corona, composed of layers of wool faced with cotton sheeting next the horse; a horse hair pad, rectangular in plan, and a goats hair pad of similar shape. These hair pads have thus far given excellent results. They are lighter than the blanket, cost less and afford much better ventilation. An extended service test of considerable quantities is the only process which will prove whether the hair pads will wear longer than the blankets. As to superior dura-



Cut No. 17.—OFFICER'S SADDLE WITH SABER CARRIER.

bility, however, with the information now available, a professional gambler would probably bet on the hair pads.

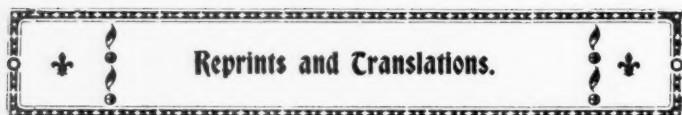
GUIDON.

A yellow guidon with black insignia was recommended and the spear head of the staff was changed in design so as to gain strength.

REMARKS.

The above discussion covers only a portion of the Board's recommendations and it is greatly regretted that time will not permit a description of other interesting and important articles. Some of the equipment recommended has already been adopted but, in the interest of business precaution, in view of the large sum of money involved, the Board recommend that the saddle and its more important appurtenances be given a regular service test for six months or a year before undertaking general issue. If all goes well this test will begin in October, as it is understood that the necessary sets of equipment will be completed by that time.





CAVALRY IN WAR.*

BY MAJOR NICKOLAUS RIEDL, NINTH AUSTRIAN HUSSAR REGIMENT.

ANY one who has studied the military literature of the past decade will have learned that the general concensus of opinion seems to be that at the present day cavalry may be unable to play a decisive role in battle, considering the improved modern fire-arms and that many renowned writers have expressed the view that cavalry, in consideration of the enormous progress made in fire-arms and aviation, has entirely played out its rôle. Critics are found who even advocate the total abolishment of that branch of the service.

Cavalry officers, on the whole, have shown little inclination in the past to carry on a paper war. Still, in more recent times many efforts have been put forth by cavalry officers to combat these erroneous ideas; and thus what is discussed in the following will hardly be new or original, but rather a compilation of the views of prominent cavalry officers, illustrated by military historical examples.

The first and most important principle in every war is "*to conquer the enemy.*" This principle is as old as the hills, though its application has not always been the same. There were times when war was carried on for one individual's particular object—that ceased in the era of giant armies; and thus the will to conquer received the modification "*conquer quickly.*"

*Translated from *Kavalleristische Monatshefte* by Harry Bell, M. S. E.; U. S. Army.

Strategical and tactical measures have to conform to that modification and will have to be employed always in conformity with the principle *viribus unitis* in such manner that all the means at the disposal of the nation, especially all forces of the army, are utilized in strictest conjunction to attain the final success.

EMPLOYMENT OF CAVALRY PRIOR TO BATTLE.

Reconnaissance.

Two armies, engaged in mobilization, are close to each other on the frontier. Concentration is in full swing. Our cavalry closes the frontier and prevents hostile patrols from crossing, which have been sent by their army to reconnoiter our conditions; it endeavors, by similar means, to gain and furnish information concerning the enemy's distribution of forces, progress of his concentration, etc. Balloons and aeroplanes, provided wind and weather conditions are favorable, assist and supplement these endeavors of the cavalry. They will furnish us at least some information concerning the location of the hostile cavalry, the defeat of which must be our first objective in order to gain a free road for our patrols and detachments, for reconnaissance and battle operations of our cavalry.

Thus, large cavalry engagements are to be expected in first line, in which our endeavor must be, by rapid concentration of large forces, to destroy, first, parts and later the entire cavalry of the enemy. This undoubtedly will frequently lead to engagements with fresh, and probably well intrenched hostile infantry and artillery; and to break their resistance it may become necessary sometimes, probably oftener than we may expect, to resort to the dismounted fight in conjunction with our horse artillery and machine guns. Our rapid and far reaching movements will allow us to attack the infantry from all sides and defeat it. These introductory engagements will have a great moral influence, and frequently a tactical influence, in the subsequent battles.

On April 24, 1877, four Cossack regiments, carrying the declaration of war, crossed the Russian frontier and rode via Bolgrad across the Barbon bridge some eighty kilometers to Galatz, captured that city and occupied

the Sereth bridge—so important for the army; they held this position for four days against the attacks of the Turks, until arrival of their own infantry.

On July 5th of the same year General Gurko rode with forty-three and a half squadrons and a few auxiliary detachments from the Danube toward Tirnowa, attacking and capturing that political and strategical place by dismounted Cossacks on July 7th.

In the first day of February, 1900, Lord Roberts sent the newly formed cavalry, division, French, from his zone of concentration (between the Modder and Orange Rivers) for the purpose of relieving Kimberley. On February 15th French encountered the Boer position at Klip Drift; that position was four kilometers in extent and garrisoned by 900 Boers with three guns; he charged and pierced it without difficulty. The road to Kimberley was thus opened.

ATTACK ON THE HOSTILE MAIN BODY.

The introductory actions of the cavalry, for the purpose of defeating the hostile cavalry, of successful reconnaissance and of other strategical import, are followed by the attack on the hostile main body from all sides. The main purposes of reconnaissance which in most cases can be accomplished only through battle, is to ascertain the location and route of approach of the hostile front and flanks in general; to establish and retain connection with our own detached groups, or, in short, to surround the opponent with a circle of smaller or larger reconnaissance detachments, which circle will at the same time serve as a screen for our measures, provided we have first succeeded in gaining the upper hand over the hostile cavalry.

An excellent example of this is furnished by the operations of the Fifth and Sixth Cavalry Divisions, later also by the Guard Cavalry Division of the Prussian Second Army at the commencement of concentration in the Palatinate up to the day of the battle at Vionville and Rézonville.

COMMENCEMENT OF THE BATTLE.

If the cavalry has thus prepared the expected battle, it will have paid well for itself, by having unburdened the infantry from the onerous duties of security and reconnaissance during the march and during rests and having furnished the highest leadership with material with which to arrive at a clear decision. Thus the infantry can save its powers while marching, can rest tranquilly and can in fresh shape enter the battle which now-a-days may be expected to last for days.

The strategic reconnaissance of the larger cavalry bodies changes automatically into the near reconnaissance, and later on into the battle reconnaissance; cavalry, in the start in front, has now no longer sufficient room and, *pursuant to orders of the commander-in-chief*, takes station at points from where it is to participate in the decision. Errors committed in this regard can never, or at least only with great difficulty, be rectified. The gravest error in this regard is to insert the main body of the cavalry between the infantry.

For its operations cavalry requires freedom of movement. Consequently its proper location is on the wings, or if our advance is made in several columns or groups, at those points from where it can observe the commencing battle from covered position and from where it can effectively interfere according to necessity.

Napoleon always concentrated his cavalry at the point where he sought the decision. Then he utilized it according to need, either to prepare the success (Wagram, 1809), or to participate in the decision (Borodino, 1812), or to prevent reverses or catastrophes (Aspern, 1809), or to gather the fruits of the victory after decision had fallen (Jena, 1806).

Holding to the maxim that cavalry should always be in front, opportunities will very frequently arise in the introductory battles, at the commencement of a large battle, for cavalry surprises, which may become of decisive import in the further course of the battle.

At Somosierra, November 30, 1808, the main column of the French army, two infantry and almost three cavalry division (10,000 troopers) under personal command of Napoleon, engaged eighteen Spanish battalions which held the steep heights on both sides of the Somosierra Pass, while sixteen Spanish guns were posted across the road in four batteries in such manner that they completely commanded with their case shot the defile.

Napoleon personally reconnoitered with field glasses the hostile position, convinced himself of the fact that the road led through an absolute defile, and then issued orders to the commander of the advance guard cavalry (General Montbrun) to have the Polish Chevauxleger squadron (150 troopers) attack the hostile battery in sight. The intrepid General Montbrun took the liberty of declaring that the charge would be impossible. Napoleon repeated his orders. Lieutenant Colonel Koziatowski started the attack, and after seven or eight minutes (the charge covering more than 2,500 meters) the defile and four batteries were taken by *one* squadron. The losses were nominal considering the success. The French infantry ascended the heights

without encountering any material resistance and lost but 100 men, while the squadron under Koziatulski lost 6 officers, 80 men and 35 horses killed or wounded; but it captured 15 guns, 1 color and 200 prisoners.

This valorous achievement of the Polish cavalry is duplicated by the well known charge of the fifteen squadrons under Colonel Pulz at Custozza, June 24, 1866, on the east wing of the battle about to commence. With a loss of 19 officers, 360 men and 490 horses this division prevented any further participation during the battle of two entire infantry divisions (Bixio and Umberto), approximately 30,000 men.

MOMENTS FOR LAUNCHING CAVALRY CHARGES DURING A BATTLE.

How, when and where masses of cavalry or smaller cavalry groups shall be inserted during a battle depends on the quality of the cavalry, on chance, on luck, and primarily on the ability of the leader. No hard and fast rules can be laid down for it. The battle of Liao Yan, to cite a modern example, offered more than one opportunity for efficient cavalry leaders.

I will here call attention to the fact that the general opinion is that *frontal* attacks by cavalry in open terrain, precluding surprises against unshaken infantry and artillery is folly and should be resorted to and carried out only in extreme cases. Even Seydlitz resorted to such an attack only once, at Zorndorf (1758), where, in spite of victory, he lost more than 1,300 men, or twenty-one per cent.

On the other hand, the effect of modern fire-arms makes itself felt directly only on the limited zone of the battlefield, but not in the extended zone of the modern battle. In the latter, therefore, cavalry which is imbued with the true cavalry spirit will always find well paying objects for attack.

Out of a mass of examples I shall here only cite Colonel Edelsheim's charge at Magenta (1859), the battles of the Reserve Cavalry Divisions Holstein and Coudenhove at Königgrätz (1866), the charges of the Brigades Bredow and Barby and those of Colonel v. Schmidt at Vionville (1870), and the audacious charge of Bechtolsheim at Custozza (1866).

Considering the enormous extension of modern battlefields it will hardly be probable that a decision can be arrived at at only one point of the field. Defeat at one point of an extended battlefield will no longer effect the whole as heretofore, as for instance at Gravelotte or Königgrätz. Therefore all arms must assist with combined forces in the decision and must carry the defeat of the enemy, from the point where he was

beaten, to those parts of his force which still hold their ground. Cavalry is especially suited for this on account of its mobility, of course, with proper assistance of artillery and later on by the infantry after it has regained its breath.

One arm alone will never achieve the decision in a modern battle. Infantry alone will hardly be able to thoroughly beat the enemy by itself, and it is just as impossible for cavalry to beat an equal opponent unaided. In any case, cavalry must do its *full* duty wherever inserted, either in the decisive battle or in the pursuit. "The work of cavalry is not one of mercy or compassion." (Prince Frederick Charles.)

A model for all times to come will always be the working together of all arms under Napoleon as well as under Archduke Charles in the battle of Wagram; of the Germans in the battle of Vionville and of the Austrians in the battle of Custoza.

Saving the cavalry until the close of the battle, to have it ready for the pursuit, would be a wrong speculation. Fleeing infantry can be pursued at the trot. The fleeing enemy is more played out than our horses in all probability.

Had the six Austrian strong cavalry divisions been ordered to interfere during the decisive battles for the Swiep forest at Königgrätz (1866) no one can tell what the outcome would have been that day. Only *after* the decision had fallen, the Austrian infantry was saved from annihilation by the interference of the First and Third Reserve Cavalry Divisions in the center and by the First Light Cavalry Division (Edelsheim) on the south wing, the latter division resorting to dismounted fire fight. The Reserve Cavalry Divisions Coudenhove and Holstein lost in this 72 officers, 1,260 men and 1,900 horses. The brigade Bredow lost at Vionville 16 officers, 370 men and 400 horses and succeeded not only in saving its own infantry, but assisted greatly in the decisive victory.

Cavalry must be in readiness for immediate action not only to independently utilize every favorable opportunity offering itself for surprising the enemy, but mainly to help its own infantry and artillery over crises. Then, of course, no sacrifice is too great. Why should there be such a hesitancy to offer up our cavalry? There are many opportunities for battle and activity between sacrifice and inactivity. Prince Frederick Charles said that cavalry is too costly to *not* utilize

it. We must demand the impossible of this arm of the service, because otherwise it would be only a costly luxury.

Did not the death ride of the Prussian First Guard Dragoon regiment at Mars la Tour fully pay the costs by creating a breathing space for the parts of the Tenth Corps just arriving on the battlefield?

RAIDS DURING BATTLE.

During the modern, long continued battle an efficient reconnoitering detachment, going to the farthest zones in rear and flank of the enemy, will succeed in ascertaining where the ammunition, subsistence and sanitary columns are located which are to replenish the fighting line. Plenty of opportunities will offer themselves to destroy such columns and create thereby situations where the hostile fighting line, being without ammunition, or being starved, will evacuate its position to our infantry at the critical moment. The numerous telegraph and telephone lines in rear of the hostile front will offer excellent objects of attack by smaller, rapidly moving bodies of cavalry. Such destruction may paralyze for hours the hostile leadership and artillery fire. Thus we have the tactical duty of worrying the flank and rear of the enemy and thereby force him to make detachments by unexpected attacks on his reserves.

On June 24, 1866, Captain Bechtolsheim in command of three platoons Uhlans dispersed the approaching Italian Infantry Brigade Dho in such a manner that it did not come into action that day. Loss of the Uhlans: two officers, eighty-four men and eighty horses.

Finally, each concentration of larger masses toward the battlefields creates situations in which an efficient cavalry body will succeed in keeping detached columns sufficiently far from the battlefield to delay their participation in the decision or to entirely prevent it.

Such a situation happened to the Austrian army July 3, 1866, at noon at Königgrätz.

DECISION FOR INTERFERENCE OF THE CAVALRY.

As a general rule, the large bodies of cavalry stationed on the wings of the battle front, often several cavalry divisions, will be concentrated there in one body, are much too far from

the highest commander to receive special orders covering each case. It is thus absolutely necessary that all bodies of cavalry used on one wing be placed under one commander.

This is clearly shown by the events in Bohemia and Italy in 1866, as well as by the cavalry action at Vionville. The example of the glorious victory of Custoza, Colonel Pulz, who, though junior in rank to other officers was entrusted with the command of the body of cavalry operating on the right wing of the battle front, is instructive. At Königgrätz, unfortunately the opposite was the case. There each cavalry division operated independently in spite of the fact, or possibly because of the fact, of Benedek having placed all of his cavalry behind the battle front to remain "at his disposition." Half of these cavalry bodies joined the retreat without having made a single charge.

Provided the cavalry has been assigned its correct place by the commander-in-chief, the cavalry leaders will find plenty opportunities to arrive at decisions as to when and where to interfere. If a cavalry leader waits for orders from higher authority for that, he will always be too late.

At the opening of the campaign of 1805 Napoleon possessed excellent cavalry commanded by young officers educated in their profession, who possessed the confidence of the men and who operated on their own responsibility.

Of the Prussian cavalry leaders of the year 1806 the British Brigadier General Remington says that "they were peace generals who never took the initiative and who always avoided to leave their well worn ruts. They were fine men and very smart on parades. They were seldom on horseback and when they had to be, they chose quiet, tractable animals. They were fat, old, slow-going gentlemen, entirely unsuited as cavalry leaders, because it was impossible for them to sit eighteen hours in the saddle on the hot summer days. Thus 225 Prussian squadrons, in which the spirit of Seydlitz and Ziethen still lived, were swept off the face of the earth by the young, active French cavalry." Fieldmarshal Archduke Charles supports this view by saying: "The good Prussian cavalry was lamed by incompetent leaders and faulty dispositions."

Napoleon issued instructions that infantry officers were never to try to prove to their cavalry that their attacks would prove fruitless. That would lame the offensive spirit of the cavalry arm.

FACTORS INFLUENCING THE CAVALRY ARM. KNOWLEDGE OF THE TERRAIN.

Modern battlefields are not target ranges. Forests and villages, hills and valleys, wire entanglements and defiles cannot be seen as readily on the battlefield as they can on the war game map. Knowledge of the terrain in which a cavalry

leader has to maneuver his command is of greater importance to him than it is to the infantry commander. Woe to the cavalry, should it unexpectedly encounter difficult or unsurmountable obstacles in a charge. For this we have horrible examples in the very death rides of the Cuirassier Brigade Michel and the Cavalry Division Bonne-main at Wörth and of the Cavalry Division Margueritte at Sedan in 1870.

The desire of having freedom of movement toward any side must cause the cavalry, as long as it stands in readiness for action, to take proper steps to gain the most exact knowledge of the terrain over which an attack will probably be made. Nothing undermines the trust of the men in their leader and nothing shakes the moral element, which is the very foundation of modern cavalry, more than the knowledge of having been *uselessly* sent into death and destruction.

Each cavalry charge, which comes to a standstill in the rapid fire of unshaken infantry must end with annihilation; the utmost rapidity of movement can be achieved only when charge can be made without stop and without change of direction in the zone of the enemy's fire.

The advance preparations for the charge must be made thoroughly down to the very last details so that when the moment for the charge has arrived, the decision is materially simplified and consequently more quickly arrived at and the execution will be in accordance with the leaders wishes. Here and there a few valuable cavalry lives may be lost before the charge, but they must be sacrificed for the welfare of the whole.

PROBABLE EFFECT OF FIRE.

Tacticians of the present day, who probably never saw a charge, calculate the effect of fire on oncoming cavalry according to the results of the target range. Is this not a wrong calculation? The few military historical, available data of recent meets show different results. Thus I can confine myself to cite these here and will refer to the interesting essay by Lieutenant Eyb published in 1908 in the *Kavalleristische Monatshefte* concerning theoretical calculations. Eyb calculates as follows the losses of a body of cavalry which has approached to within 600 paces

of an unshaken infantry, but which has been under fire for some time, based on experience on the Bruck traget range:

Nine per cent. of the animals and five per cent. of troopers killed; twenty-seven per cent. of the animals and twenty per cent. of troopers wounded.

These results are based on both infantry and cavalry being numerically equal. Actual events show more favorable results.

At Sedan, where the Germans fired on the French during the battle, like into a sack, there was one hit to every 375 rounds fired.

In the battle at Valestino (27 April, 1897) the seven squadrons (400 troopers) under Colonel Ibrahim Bey had a loss of only 30 dead and 100 wounded, though they were under cross fire of unshaken infantry in trenches and three batteries, which fired case shot, during the most dangerous part of their charge, that is at short range. In spite of that murderous cross fire the Turks finally charged and stormed, dismounted, the attack objective, the infantry trenches—dismounted, because their horses had completely given out.

In the above mentioned charge of General French on the Modder River (1900) the losses of the cavalry division (3,600 sabers) were 16 dead and wounded and 30 horses, that is less than one per cent. And in addition, the opponent consisted of world renowned Boer sharpshooters.

During the days of Sandepu (27 January, 1905) the Second Daghestan Cavalry regiment charged victorious Japanese infantry (about two battalions) establishing itself in the village Landungou and supported by eight guns; the charge commenced at about 3,000 paces. The charge, executed under the most unfavorable conditions, came to a stand at wolf pits, wire entanglements, and a natural, unsurmountable ditch at close range of the firing infantry. The regiment retreated the way it came, losing heavily. Total loss: three officers, sixty-three men and sixty-two horses. One squadron advancing on the flank, had but one man wounded. In spite of a hot fire lasting fifteen minutes, the loss was but sixteen per cent. The charge was made at the trot.

Bagraton describes a charge of several sotnias of the Fourth Ural Cossack Regiment against two companies Japanese at Zinzajpao. The Japanese were driven back, losing 100 dead, 57 wounded, 39 prisoners, while the Cossacks lost 1 killed, 7 wounded, 12 horses.

These charges all were made without possibility of surprise and against more or less intact, and even victorious infantry. Thus the infantry will first of all have to bring proof that its fire is actually annihilating at all times. Unfortunately there are no experiences in regard to machine gun fire. In war they undoubtedly will play an important rôle. Still, cavalry must not ask what arms the opponent has, all it has to ask is: "How shall I attack to prevent the opponent from profiting the least from the fire effect of his arms."

PHYSIOLOGICAL EFFECT OF FIRE.

Much has been written, especially by the medical profession concerning the humane wounds caused by the jacketted bullet. Experience now has shown that even serious or mortal wounds do not place men and horses immediately *hors de combat*. Hits in the brain or back bone, in the full stomach or heart are as a rule mortal; hits in bones as a rule make the man or animal immediately unfit for further service; but hits in the lungs, muscles or intestines cause relatively slight wounds and lead to unfitness for immediate battle only after some time has elapsed. French experiments gave the result that eighty per cent. of mortally wounded horses were able to cover two kilometers at the gallop and that the largest part of them died only after some hours. Of interest is the report of the Prussian Lieutenant v. Salzmann concerning the wounding of his horse in an engagement with the Hereros, which latter used the dum-dum bullets in part. His horse was hit at a range of 100 meters, receiving three bullets almost simultaneously from the left, the first piercing the croup, the last one the heart. In spite of this the horse carried its rider more than 1,500 meters out of the danger zone before falling down and expiring.

I may be allowed to cite here also an event occurring in the battle of Custoza. My father, serving as captain in the Bavarian Hussars in the Brigade Bujanovic in the charge against Villafranca, suddenly encountered, in the pursuit of Italian troopers and accompanied by but a few Hussars, heavy infantry fire at the edge of the village of Villafranca. He was wounded and his horse was shot in several places. After it had carried its rider for quite a distance out of range of the bullets it fell dead, burying its rider underneath of it. With sixteen bullets in its body it had covered more than two kilometers before falling!

The inference is easily arrived at: In a charge covering more than 1,000 meters the larger part of seriously wounded horses would carry their riders still to the infantry and only play out when the objective has been reached, when the enemy has been ridden down.

The Italian War Office appears to have come to the same conviction, based on experiences of the Tripoli campaign, for

it is stated in newspapers that it is the intention of the Italian government to change the caliber of the small arms and to abolish the jacketted bullets.

SURPRISES.

Wherever cavalry intends to operate it should endeavor to surprise the enemy. It will surprise him *morally*, if he shows no resistance although he had time therefor, because his nerves gave out and prevented him from coming to a decision to action.

In the campaign of 1866 in the Tyrol, Lieutenant Torresani, reconnoitering with a patrol of eight troopers, unexpectedly encountered a strong column of Garibaldi's force. Deciding on the spur of the moment, he charged the head of the column, dispersing it; then he quickly faced about and received a badly aimed fire only shortly before his disappearance. Only one horse was slightly wounded in this affair.

We can also imagine how easily cavalry can come .by fortunate circumstances, into situations where it can surprise *physically*, *i. e.*, where the firing opponent is unable on account of sufficient time to fire the necessary number of rounds to drive off the cavalry. Such a case probably can happen only to very small bodies of cavalry against infantry (charge made by Bechtolsheim at Custoza in 1866), while larger bodies of cavalry can count only on *moral* surprises, from which, however, more frequently happens the more the hostile infantry and artillery is shaken in its powers of resistance.

A case of physical surprise by larger bodies of cavalry happened under my personal observation during the cavalry maneuvers of 1889, in which I served on the division staff. Two cavalry divisions stood opposed to each other at cannon range. Our division was in a position behind a forest and had the duty of favoring the retreat of our infantry. Between our and the opposing division was bottom land covered with corn, which our division commander decided to cross in mass formation to attack the opposing division in flank and unexpectedly. The formation probably was not happily chosen, the regiments marched in column alongside each other.

The hostile division commander at once perceived our critical situation as we moved in a flank march in a dense mass across the lowland. He immediately launched one of his brigades against us on the shortest road and that brigade came so rapidly that only the regiment riding on our flank found time to deploy; the regiment next to it engaged only in part, and the other brigade simply remained still and did nothing. During this cavalry battle, which resulted in our defeat in spite of our numerical superiority, the other hostile brigade attacked our unprotected infantry in rear.

PSYCHOLOGICAL EFFECT OF MODERN BATTLES.

Whoever has closely followed the reports and accounts of the battles of several days' duration in Manchuria, gains the impression that infantry and artillery suffered from extreme tension of nerves in the first hours and days of a battle. Officers and the best men had fallen, a shot up mass of men, among them many cowards, still held the positions, in trenches, for days without food. Ammunition commenced to run short; complete apathy set in, as has frequently been observed to happen here and there in maneuvers during exhausting marches and engagements. Absence of leaders, mixing up of different organizations, psychic and physical exhaustion and hunger, changed even the best of troops into mobs. Should then the cry be raised "*cavalry is charging us*," is it to be wondered at that every man's heart jumps into his mouth and that the human machine gives out completely? Is it any wonder then that in the fear and surprise most if not all of the rifles are fired into the air without proper aim? Is it any wonder then that the men no longer can work their rifles properly, can no longer calmly insert cartridges in their magazines when the cavalry charge overwhelms them?

And those are the times when cavalry reaps the benefit and pay for its weeks of endurance and hardships in the reconnaissance service, and when it can gain time for its own weary infantry to again concentrate for renewed efforts and advance.

Each and every cavalry charge on a large scale attracts the attention of all parts of the battle front which may be struck by the charge. Even if the charge miscarries our infantry has an opportunity during its execution to better its position and thus the charge does its part in preparing the subsequent victorious decision.

The charge executed by Bredow's six squadrons sufficed to lame several infantry and cavalry divisions for some hours, although no fresh cavalry bodies followed up that charge.

The psychological effect on the infantry will, of course, not be the same along the entire battle front. To perceive the proper moment for a charge on some part of the battlefront and to be able to utilize that moment is a most necessary qualification for an efficient cavalry commander. And just because

it is a difficult matter to perceive when the proper moment has arrived, we have so very few historical examples of fortunate and decisive cavalry charges against infantry. The more destructive modern fire-arms prove to the moral and physical force of the battling arm, the more frequent will chances offer themselves for cavalry charges, and one who then hazards all, will win. The success attained well pays for the necessary blood expended.

When Prince Frederick Charles issued orders in the evening of the 16th of August, 1870, to the Brigade Schmidt (Third and Fifteenth Hussar Regiments) to charge northeast, he justified his decision with the words: "I want to prove to Marshal Bazaine that I have won the battle." When the Hussars a few minutes later dispersed the hostile squares, just as darkness set in, the Germans for the first time heard the cry "*saute qui put*" of the brave enemy, whose officers even were carried away by the resulting panic.

It should not be neglected here to call attention to the fact that the technique of the infantry battle has completely changed at the present day. Napoleon expended masses of infantry, occasionally several divisions, for the decisive attack; later on the battalion became the tactical unit; after the Franco-Prussian campaign it was held that the company commanders had won the campaign, and today we expect things of the individual soldier, which we did not expect from any one less than a general in olden times.

The simple soldier is expected to know all about the terrain: to be able to judge distances with due regard to all factors; to correctly estimate the proper rate of fire, saving or expending ammunition; to observe the enemy's and his own fire effect, etc., and withall keep a clear head! After long and exhausting marches in long columns on dusty roads, after marching across rough country with heavy pack, after long work with the spade, in which latter work he is supposed to be an expert, after remaining for hours under hostile fire, of the intensity of which we can form but a poor opinion based on the ammunition expended in the last war, he is supposed to have an efficient, calmly working heart, though his stomach often repels for the want of nourishment and though thirst brings him near utter exhaustion! Are not all these things psychological and physiological moments which more than ever heretofore promise a future to a brave and heroic cavalry?

AFTER THE DECISION HAS BEEN MADE.

The maxim, so frequently treated of in theory: "*Pursuit of the retreating enemy or salvation of our army after a lost battle*" appears to be hard of execution in practice. At least the history of the latest campaigns cites but a few successful pursuits operations on a large scale. Attempts to save the army were either superfluous because the enemy did not pursue, or they mostly ended with complete annihilation of the cavalry which sacrificed itself.

Classic examples of pursuits are Napoleon's operations after Jena (1806) and those of the allies after the battle of Waterloo (Belle Alliance 1815), which ended with the complete dispersion of the hostile army.

The pursuit after Königgrätz was far from being carried out energetically, prevented, however, by the correct utilization of the Austrian cavalry divisions. After the large battles of Metz and Sedan no pursuit took place because the hostile army was bottled up.

The Russo-Japanese War did not show anything much in this respect, as neither after Liao Yan nor after Mukden were there sufficient Japanese cavalry available and as the infantry of the victor was so exhausted, on account of the battles lasting several days, that no thought could be entertained of a rapid pursuit in spite of the desires of the highest leaders.

The salvation of the Austrian Army at Königgrätz, achieved with the greatest bravery, was effected by only one-half of the available cavalry. Only the First Light Cavalry Division (Edelsheim) and the First and Third Reserve Cavalry Divisions (Holstein and Coudenhove) were used and prevented for the moment the Prussians from pressing after the debris of the army fleeing across the Elbe, while three divisions accomplished the retreat with the infantry, without having been in battle.

On the other hand, the charges of the Cavalry Division Bonnemain and of Michel's Brigade at Worth, as also the audacious charges of Gallifet at Sedan, show clearly how salvation attempts should *not* be made.

An excellent example of how cavalry as a part of a smaller force can save its infantry from destruction is found in the battle of Melilla, (20 September, 1909). Ninety Alfonso Jägers charged the Moors attacking the rear guard battalion and bring them to a stand; a second charge of not more than forty Jägers cuts the Moors away from the infantry and the third charge made by but eighteen Jägers, causes them to flee. This squadron stood for fourteen hours without food, feed or water in torrid weather, charged three times in the deep sand, and had but eight killed and seventeen wounded. Its own battalion was saved and the enemy lost 100 wounded; wounds caused by the *arme blanche*.

After the decision has fallen we must demand of the cavalry that it remains in close touch with the retreating enemy, that it drives him on the evening of the day of battle and in the subsequent nights from his camps or cantonments and thus

increase the general dissolution to annihilation. What matters a few hundred played out horses, if we can thereby spare our own army another bloody battle. But as a rule we do not know the degree of the enemy's dissolution, because, as is clearly proved by the battles of Wörth, Vionville, Liao-Yan and Mukden, contact with the enemy was lost in a very short time. That the cavalry under such eminent leaders as were the victors in the just mentioned battles omitted this first duty after a gained victory is proof how difficult it is to hurry played out troops after a fleeing enemy.

Had the Japanese known conditions with the Russian army after Mukden as we know them today from Ullrich's "*Baptism of Fire of the Russian Army in the Campaign of 1904-5*," they undoubtedly would have inserted the very last man and horse of the combined Brigades of Akiyama and Tamura to annihilate the Russians.

If we have no longer any large cavalry masses at our disposal for the pursuit, smaller bodies of cavalry will perform the same service in certain respects, by swarming around the fleeing enemy like wasps, stinging him wherever possible, allowing him not a minute's rest and exhaust him completely physically, until our own infantry, refreshed in the meantime, again comes up and takes over the pursuit.

ATTACK FORMATION OF CAVALRY.

Although it would be interesting to form a theoretical picture of the formations in which cavalry attacks infantry and artillery, nothing would be served thereby.

I am of opinion that every efficient cavalry leader improvises the formation for the charge or mounted attack in each single instance according to the situation as found. Only the enemy's situation, the terrain and condition of our troopers can say where the charge will suffice or whether dismounted fire action has to be resorted to in order to screen the cavalry's preparation for the mounted attack, or whether the dismounted fire fight should be had in combination with the mounted attack. The first requisite for *each* formation of attack is that the form of deploying assures the highest celerity and power of shock.

Our most important and most costly arm was, is, and will always remain the quick and obedient horse. Any cavalry leader who is ignorant of fully utilizing this arm and who does not bring it to its fullest account wherever possible, will have but little use also for repeating carbines, machine guns and rapid fire artillery, because he will finally transform his cavalry into mere mounted infantry.

Ability of quick motion of cavalry has very materially increased in the past fifty years; it undoubtedly can be still more increased. Rapidity goes hand in hand with increasing betterment of horse material. It is the duty of a cavalry genius to utilize both for the annihilation of the hostile battle front. Wave after wave must be thrown in succession against the hostile fire; the first wave to shake the opponent, the second to frighten him, the third to cause him to flee, when he sees these waves engulfing him from all directions.

Sufficient room for the attack by masses of cavalry will be found in every field of battle. A brigade requires approximately 1,500 meters, a division, which must be formed with great depth, hardly more than 2,000 meters.

In 1862, Stuart attacked at Old Church in column of fours; Bechtolsheim at Custozza in column of platoons; Pluz at Custozza and Bredow at Vionville in line; French at Clip Drift in three lines, the first line deployed as skirmishers. On September 7, 1757, Seydlitz stormed, at Pegau, the bridge across the Elster with dismounted Hussars and immediately thereafter defeated the hostile cavalry with his troopers by coming unexpectedly out of that village. A few weeks later, November 5th, he screened his departure by five Hussar squadrons fighting on the Janus Hill east of Rossbach and then charged in full force the superior cavalry of the allies which was marching along without apprehension, defeated it and then turned against the nearest infantry, compelling it to flee. At Jicin, the Division Edelsheim fought dismounted independently, holding a hostile infantry division for hours.

Examples regarding the operations of the cavalry in the battle of Liao-Yan from August 29th to September 5th would form a chapter by themselves. We will briefly state that the faulty utilization of the cavalry in the Russo-Japanese War were the principal reasons for the failure of this arm and that the phases of the modern battles did not condemn that arm to inactivity.

From all this we draw the following conclusions:

The *very best* leader is just good enough to lead a large body of cavalry. Over production in this respect is not to be feared. Every trained tactician will know how to utilize cavalry, but only an actual, competent cavalry general can lead it. Such men are a scarce gift of God.

Cavalry must be equal to all demands in war in respect to organization, training and equipment and it must try to keep up with the progress of the other arms in the tactical field by increased fostering of the cavalry spirit, which never precludes utilization dismounted. Fostering the cavalry spirit in the troop, in the regiment, etc., must receive the place which is its proper due. The moral qualities of troops and their confidence in their leaders counts more than a double superiority, according to the lessons taught by the Russo-Japanese War.

Cavalry, which believes itself invincible, and is thus filled with the true cavalry spirit, will always be victorious, still the thunder of cannon, in the roll of rifle fire, in the clatter and rattle of the *mélee* it should always have in its mind and hear General Wrangel's words: "A body of cavalry, which consecrates itself to death, can not be stopped by any earthly power and its victory is just as certain as the night is followed by day."

THE IMPORTANCE OF CAVALRY.*

BY FREDERIC H. VON BERNHARDI, GENERAL OF CAVALRY, (RETIRED)
GERMAN ARMY.

THE fire of modern rifles and guns has deeply affected the tactics of the three arms, as we have seen. While it has altered only the form of fighting of infantry and artillery and the manner of their tactical employment without touching the impotence of both these arms as a whole, and within the army, it has had a far greater influence on the cavalry. Not only the *tactical formations* used by cavalry in action have

*Extract from a recent book by General von Bernhardt entitled "On War of Today."

changed, but its *employment* is altogether different. Whereas, its importance rested in former times chiefly on its decisive participation in battle, its importance today is founded on *strategic* action. But in that sphere of action the value of cavalry has extraordinarily *increased* just owing to these very conditions of modern times, as will be seen, if we examine them with an unbiased mind.

The opinion is generally held, it is true, that the cavalry has lost almost all its importance in the face of modern arms and armies of masses, and this opinion is apparently confirmed by the experiences of the latest wars, in so far as indeed the cavalry has played a very inactive rôle in modern campaigns, with the exception of the South African War; but this circumstance cannot at all be considered decisive for the future, for they were quite peculiar conditions which caused the cavalry to make such a poor show in recent times. One main point above all was of decisive importance for this.

The effect of modern firearms, with all its consequences, has, as we have seen, caused occasions for successful charges against firearms to be of very rare occurrence in the latest wars, and they will be rarer still in future. Such charges have, however, positively ceased to be of decisive importance in battle, by reason alone of the comparative small numbers of cavalry. Owing to the enormous size of modern armies and the extent of the battlefields, a successful charge of even so large a body as a cavalry division could no longer bring about a decision by itself. But the cavalry has nevertheless hitherto stuck to the fiction that its relation to the other arms was still similar to what it was formerly—that an action of the three arms combined was possible even to-day, as in the days of Frederic and Napoleon. The cavalry looks now, as it looked then, upon a charge in battle as its paramount duty; it has almost deliberately closed its eyes against the far-reaching changes in warfare. By this it has *itself* barred the way that leads to great successes. The responsible military authorities has failed in the same way. Very reluctantly the cavalry was armed with firearms, at first even with quite useless weapons, and it is but very recently that the German cavalry got an efficient rifle; its use is still looked upon as quite a subordinate matter. The

tactical exercises of cavalry divisions are still carried out as of old; we still cannot bring ourselves to enter heart and soul upon the tasks imposed on us by the new order of things. Superior commanders, too, are still imbued with obsolete ideas, and employ cavalry according to these ideas. The Emperor's "maneuvers" in 1909 furnish an interesting example of this. Cavalry owes its decline to all these circumstances. But whether it will gain in future the place due to it will, above all, *depend on whether the rank and file will resolve with open eyes to break with the ideas of the past, and devote themselves to the tasks of the present without reserve.*

The German cavalry need not, for all that, give up the hope of successfully charging infantry and artillery. Anyone who wished to deduce from my remarks that I thought the time for such charges was a thing of the past would completely misunderstand me. I am rather of the opinion, and have always stood up for it, that modern infantry will sometimes present a favorable object for a charge, especially when it is a question of infantry of the second and third lines. If such infantry is demoralized by the dissolving influences of modern action, is out of hand of the commanders, and no longer fires deliberately, it will easily enough become a prey of a bold cavalry charge from various directions if the ground offers at least some advantages. Such situations are sure to arise even to-day, especially in pursuits. The enemy's artillery, standing far behind the foremost fighting line, can also often be attacked by cavalry, though not in front, yet from the flanks, and especially in rear, if the enemy has used up his reserves, or, as a modern writer has it, if there are no reserves at all, and have been replaced by "motors full of ammunition."

Obsolete, I only hold to be that opinion which thinks that the *main task* of our cavalry is to co-operate directly with the other arms and to charge in battle; which desires to subordinate all action of cavalry to this task, treats fire-fight of cavalry merely as a last resource, and would like to restrict the strategic freedom from that arm by constant deference to its possible employment on the battle field.

If the cavalry takes the field in a future war with notions

of that kind, it will *certainly not* give us that advantage which we otherwise can expect, and have a right to expect from it.

The relations of cavalry to the other arms, and altogether to the conduct of war, have, as a matter of fact, completely altered. *An action of the three arms combined in the old sense*, as is still hovering before the mind of our cavalry soldiers as a delusive idea of bygone times, is *no longer feasible at all*. The participation of cavalry in the decisive action of infantry and artillery is no longer necessary. All the more important it is to be absolutely clear on the tasks which a future war will demand the cavalry to solve, and on the mode by which these tasks must be solved. The superior commanders and the cavalry itself must learn to deal with these problems, and prepare themselves to carry them out, if the cavalry is to continue to be a useful instrument of war in the future.

Reconnoitering and *screening* must be mentioned first of all in this connection. Both have eminently gained in importance under modern conditions. Advantageous as it is to have as accurate and as early information as possible on the enemy's measures, and to screen our own concentrations and movements with the object of surprising the enemy and increasing thereby the chances of success, the advantages will be all the greater when great masses are concerned. The larger the armies are which are being moved, and the longer it therefore takes to concentrate them or change their direction of march, the more important it becomes to reconnoiter in time, so as to be able to initiate early enough the measures which may have become necessary through the facts ascertained by reconnaissance. Modern arms indirectly influence reconnaissance in so far, too, as, owing to the long range and effective indirect fire of artillery, we must deploy for action sooner than formerly. It will be very exceptional for superior commanders to reconnoiter personally before such deployment. They are thus almost entirely dependent on the results of cavalry reconnaissance, not only for their operations, but also for their dispositions for battle. This makes cavalry reconnaissance all the more valuable, but also calls for greater efficiency of that arm.

The cavalry must precede the armies as far forward as possible, to beat the hostile cavalry and push it back vigor-

ously, so as to allow our own patrols to approach rapidly the hostile columns and discover their movements. So long as an efficient hostile cavalry is in the field, our own will be hampered in all its enterprises, and accordingly obtain little information. We must further bear in mind that the enemy's cavalry may decline to fight with cold steel, using the carbine instead, and be supported in this action by detachments composed of all arms. The cavalry must therefore, be prepared to undertake independent operations of an extensive nature, and be able to beat by dismounted action strong hostile forces, or to turn them. If it can do both, then, and only then, will it carry out its object.

Offensive power is, however, not enough for cavalry; it must have also learned to push out its reconnoitering bodies rapidly and systematically, and to send back as fast as it possibly can to the head quarters concerned the early information it had obtained. Great horsemanship, combined with daring boldness and vigilance of patrols and reconnoitering squadrons, are necessary to attain these objects; all mechanical means must, moreover, be used to promote rapidity of gaining and transmitting intelligence of decisive importance. The army cavalry must therefore be equipped and conversant with wireless telegraphy, telephones, signalling apparatus and flying machines, the uses of which have already been discussed in another chapter. It may also be advisable to use signalling balloons, with the object of conveying to the reconnoitering squadrons orders and other communications. If we make such a balloon ascent at a certain hour of the night from a pre-concerted spot, the reconnoitering squadrons and other detached bodies will be able to discover it easily, and read the flashes given by the Morse code. If this system answers well at trials made in peace-time, each cavalry division could be equipped with a small balloon of that kind. It would render good service in clear weather. The cavalry must also keep as much as possible in constant touch with any dirigible airships that may be available. The airships must arrange their action so as to work ahead of the cavalry, and furnish it with intelligence about large concentrations of the enemy or their approach, to enable the cavalry to adopt its measures accordingly. These

ships must therefore beat the enemy's airships and flyers, and start early to meet them with that object. To insure co-operation in reconnaissance on land and in the air, will often be advisable to place the cavalry and airships under one uniform command. The intimate co-operation of these two arms will best insure success. We will also be obliged to attach to the cavalry specially designed guns to support our airships in their fight against those of the enemy, or to fight them independently.

Early reconnaissance is particularly important to that party which has resolved to remain on the *defensive*, strategically or tactically. That party has then surrendered the initiative to the enemy, and must conform to his will. It cannot arrange for suitable measures of defense until sufficiently informed as to the grouping and main direction of attack of the enemy; it runs the risk of being too late with these defensive measures; if it does not receive correct intelligence about the enemy's measures in ample time. At the same time, it will be its concern to screen the position of its own reserves, so as to deliver a counter attack by surprise. *The assailant*, on the other hand, who seizes the initiative and imposes his will on the enemy is in the first instance, interested in *screening* his concentration, and his main direction of attack so as to act by surprise, and thus make it impossible for the enemy to adopt his counter measures in time. But it is also desirable for him to gain a knowledge of the strength and grouping of the hostile reserves, so that he may not come unexpectedly on stronger forces than he had anticipated. In this way the cavalry has always to face the double task of simultaneously reconnoitering and screening; and it will often have to decide on which of these activities it has to lay the greatest stress. When screening, it will, above all, be a question of warding off with firearms any hostile attacks, because effective screening is generally only possible by defensive action in combination with ground. Sometimes only when advancing must we try to screen offensively by boldly attacking every hostile party, down to a single patrol, pushing them back, and endeavoring to capture the enemy's dispatch riders. If screening is to be supported by airships and flyers, it can only be done offen-

sively by attacking the hostile ærial fleet and trying to render it harmless.

When we are reconnoitering and not screening, we must always try to come to close quarters with cold steel, as we wish to attain our object quickly, and must therefore decide an action rapidly, and that can only be done by charging. In case of need only, when there is no other course open, must we have recourse to the carbine. Since both parties have an equal interest, as a rule, in gaining rapid success, we are justified in assuming that during the first period of a war there will be great cavalry charges, and that only that party will have recourse to firearms which, from experience, has become aware of the enemy's superiority when charging; the party using its fire arms must then be beaten by dismounted action as well. From this it follows that cavalry, intent on carrying out its duties, must also prove superior in dismounted action, so as not to lose in fire action the superiority it has gained with cold steel.

In addition to reconnoitering and screening, the cavalry must at all cost *act on the enemy's lines of communication*. This is of the utmost importance in modern war. The larger the armies, the less they are able to live on the country; the quicker and the further the fire arms shoot, the more ammunition will be spent. In equal measure grows the importance of supplies and of the lines of communication; the interruption of regular supplies may prove then all the more fatal. Here, therefore, is a field for the cavalry to achieve far-reaching successes. Even tactical decisions may be effected, at least indirectly, by the enemy's supplies of ammunition being cut off directly in rear of the battlefield.

In view of these dangers threatened by cavalry, both parties will take pains to guard in sufficient strength with troops, at least of the second and third lines, those communications which may be endangered. It will, therefore, not be easy for the attacking cavalry to carry out its mission. It will not only have to beat the enemy's cavalry which will certainly oppose it off the field, but it must also operate independently on the flank and in rear of the enemy for days, and perhaps for weeks, entirely separated from its own army, and be able to capture

by swift attack any supply columns on the march or while parking as well as depots on the lines of communication. The cavalry must therefore be specially equipped for these duties, and have substantial fighting power, not only mounted, but above all dismounted. If its own strength is not sufficient, cyclists must be attached to it, because a *combination of cavalry with cyclists* will undoubtedly prove altogether extremely effective.

Fears have been expressed that enterprises against the enemy's communications might jeopardize the participation of cavalry in battle, and thus, of course, its participation in pursuit or covering retreat as well. The German cavalry training, too, warns, as it were, against these kinds of enterprises, because the cavalry might be diverted from what is still considered its paramount duty—namely, charging in battle. Views forming the basis of such regulations are in no way in harmony with the requirements of modern war, and completely misjudge the relative value of employing troops. I think, moreover, that the objection of raids diverting a well-led cavalry from its proper duties is perfectly untenable. If the raid is made in a decisive direction—that is to say, in a direction in which the commander-in-chief has decided to bring about the final issue; if the cavalry commander is kept constantly informed of the intentions of general headquarters and on the general situation, which seems feasible by wireless telegraphy or by some other means, he can easily move towards the enemy's army when the crisis is approaching, and appear on the day of battle on the flanks and in rear of the adversary like Stuart at Gettysburg. The raid itself will lead him in the decisive direction.

He who wants to keep the cavalry always in close proximity to the flanks or even behind the battle front, will never derive any advantage from that arm under modern conditions; the cavalry will in that case, like in all recent wars, except the American Civil and South African Wars, stand idling about on the battlefield vainly waiting for its chances to come. Freedom and movement together with every kind of action are the life and soul of that arm, which is bound to decay if it does not succeed in adapting itself to modern requirements.

The cavalry in the North American War of Secession, approaching its tasks with an unbiased mind and not being hampered by tradition and routine, soon found the right way for great activity. The South African War, too, is very instructive in this respect. General Buller, who seems to have been still imbued with perfectly antiquated ideas about cavalry, always wanted to have that arm on his flanks to cover them, even when they were not at all threatened; he thus hampered all freedom of action of cavalry. The consequence was that his cavalry did nothing. General French, on the other hand, took the opposite stand. Extensive raids around the enemy against his flanks and rear was the principle of his action, and he would have done even more than he did in this direction, had not General Roberts repeatedly clipped his wings and held him tight, and had not the horses completely broken down. But the fundamental ideas of his cavalry leading were undoubtedly right, strategically as well as tactically. A warm adherent to cold steel and ever ready to charge, he still knew the full value and importance of the fire arm, and never hesitated to attack dismounted whenever it suited the case.

But it has not only been asserted that raids against the enemy's lines of communication will jeopardize the cavalry's participation in battle—it has been further asserted that these kinds of enterprises are not at all possible under modern conditions. The numerous lines of communication defence troops, and the extensive telegraphic system of European theaters of war, would make it always possible to concentrate superior forces against such cavalry and paralyze its action. I think this view is wrong.

Certainly, at the beginning of the war occasions for such enterprises will be rare. When the French army is concentrating on one line from the Belgian to the Swiss frontiers, we cannot dispatch a cavalry corps on the French lines of communication. But when, during the course of the war, different and separate army groups will be forming—as will always be the case—a suitably equipped cavalry will certainly be able to operate against the enemy's flanks and rear. If we study the campaign of 1870-71 from this point of view, we will not be

by swift attack any supply columns on the march or while parking as well as depots on the lines of communication. The cavalry must therefore be specially equipped for these duties, and have substantial fighting power, not only mounted, but above all dismounted. If its own strength is not sufficient, cyclists must be attached to it, because a *combination of cavalry with cyclists* will undoubtedly prove altogether extremely effective.

Fears have been expressed that enterprises against the enemy's communications might jeopardize the participation of cavalry in battle, and thus, of course, its participation in pursuit or covering retreat as well. The German cavalry training, too, warns, as it were, against these kinds of enterprises, because the cavalry might be diverted from what is still considered its paramount duty—namely, charging in battle. Views forming the basis of such regulations are in no way in harmony with the requirements of modern war, and completely misjudge the relative value of employing troops. I think, moreover, that the objection of raids diverting a well-led cavalry from its proper duties is perfectly untenable. If the raid is made in a decisive direction—that is to say, in a direction in which the commander-in-chief has decided to bring about the final issue; if the cavalry commander is kept constantly informed of the intentions of general headquarters and on the general situation, which seems feasible by wireless telegraphy or by some other means, he can easily move towards the enemy's army when the crisis is approaching and appear on the day of battle on the flanks and in rear of the adversary like Stuart at Gettysburg. The raid itself will lead him in the decisive direction.

He who wants to keep the cavalry always in close proximity to the flanks or even behind the battle front, will never derive any advantage from that arm under modern conditions; the cavalry will in that case, like in all recent wars, except the American Civil and South African Wars, stand idling about on the battlefield vainly waiting for its chances to come. Freedom and movement together with every kind of action are the life and soul of that arm, which is bound to decay if it does not succeed in adapting itself to modern requirements.

The cavalry in the North American War of Secession, approaching its tasks with an unbiased mind and not being hampered by tradition and routine, soon found the right way for great activity. The South African War, too, is very instructive in this respect. General Buller, who seems to have been still imbued with perfectly antiquated ideas about cavalry, always wanted to have that arm on his flanks to cover them, even when they were not at all threatened; he thus hampered all freedom of action of cavalry. The consequence was that his cavalry did nothing. General French, on the other hand, took the opposite stand. Extensive raids around the enemy against his flanks and rear was the principle of his action, and he would have done even more than he did in this direction, had not General Roberts repeatedly clipped his wings and held him tight, and had not the horses completely broken down. But the fundamental ideas of his cavalry leading were undoubtedly right, strategically as well as tactically. A warm adherent to cold steel and ever ready to charge, he still knew the full value and importance of the fire arm, and never hesitated to attack dismounted whenever it suited the case.

But it has not only been asserted that raids against the enemy's lines of communication will jeopardize the cavalry's participation in battle—it has been further asserted that these kinds of enterprises are not at all possible under modern conditions. The numerous lines of communication defence troops, and the extensive telegraphic system of European theaters of war, would make it always possible to concentrate superior forces against such cavalry and paralyze its action. I think this view is wrong.

Certainly, at the beginning of the war occasions for such enterprises will be rare. When the French army is concentrating on one line from the Belgian to the Swiss frontiers, we cannot dispatch a cavalry corps on the French lines of communication. But when, during the course of the war, different and separate army groups will be forming—as will always be the case—a suitably equipped cavalry will certainly be able to operate against the enemy's flanks and rear. If we study the campaign of 1870-71 from this point of view, we will not be

long before we arrive at this conviction. Of course, the troops employed on such a raid must not only have considerable fighting power, but must also be equipped with columns and trains capable of moving as rapidly as the troops themselves, making them, for some time at least, independent of the country, as well as of their own lines of communication. By destroying the enemy's railway and telegraph lines, as well as by spreading false intelligence, the raiding-corps must try to keep the enemy uncertain about its activity, and render his concentration for a counter offensive difficult. By demonstrative movements and rapid marches, sometimes carried out at night, the corps must deceive the enemy, escape his countermoves, and unexpectedly appear where the blow is least expected. It is of course, altogether presumed that these demands are met when cavalry is employed independently in this way, as well as in reconnaissance and pursuit. If these demands are satisfied, the raids will prove feasible too. Their importance is generally underrated. I do not only think them possible, but a downright necessity, as we shall see when we deal with the strategic operations; and I believe that raids will not only favorably influence the decisive issue in battle, but also lead the cavalry in a favorable direction on the battle field itself.

At the *final issue of battle* the cavalry divisions can also take their due share only if they are able to act with firearms in considerable strength. There being no longer any question of cavalry co-operating constantly and closely with the other arms in the way it is still done with infantry and artillery, the cavalry, combined into large masses, must try to intervene from the flanks of the line of battle, and to become effective chiefly by the direction of this attack. This must be made against the flanks and rear of the enemy. Its mobility enables the cavalry to envelope the enemy's flanks and penetrate to his rear. It must not be afraid of abandoning, then, altogether its own lines of communication for the time being. It will always be able to regain them again. If it is opposed by the enemy's cavalry, that cavalry must be attacked without hesitation, beaten and pursued with portions of the force. This is presumed for all further enterprise. If it is successfully accomplished, then the road is open to great achievements. The

moment has now arrived where the cavalry can render invaluable services to the other arms, though not in direct co-operation, by drawing upon itself hostile troops and preventing them from intervening in the decisive issue. The victorious cavalry will first employ its artillery, machine guns, and, if need be, its carbines against the enemy's flanks, reserves, artillery and ammunition columns, and use every opportunity for acting offensively, mounted and dismounted, without, however, engaging in an obstinate fight against superior numbers. Its mobility enables it here again to get away and rapidly appear at another place. The cavalry must perpetually try to threaten and damage the enemy where he would feel it most, but must reserve its main fighting power for the moments of the crisis. At these moments it must not mind heavy losses if it can effectively contribute to gaining victory. It will resolutely attack and push back in good time the detachments the enemy has pushed forward for protecting his flanks and rear, and thus have the road clear when the final crisis arrives. It is then of great consequence that the cavalry should act effectively at all costs, and to intervene in the decisive combat itself by charging, if that can be done, otherwise by fire action.

The cavalry of *the defense* will first of all try to capture the assailant's artillery or to engage it, paying at the same time special attention to his heavy artillery. It will throw itself on the attacking infantry as soon as that is preparing for assault, which can be noticed by the increase of fire and by the resolute advance of reserves that may be available still. It depends on circumstances whether the cavalry makes use of the charge here or if dismounted action. It will also have to intervene sometimes in relief of its own infantry when that seems to grow weary. The cavalry of *the attack*, on the other hand, will not only act offensively against *those* portions of the hostile artillery which are firing on the attacking infantry, but do all that is in its power to prevent reserves from intervening in the fight, and, if possible, to bring to bear reverse fire on the defensive line itself. Occasions for charging infantry will be rarer for the cavalry of the attack than for the victorious cavalry of the defense.

Another particularly important task for cavalry is to delay hostile troops hurrying to the battlefield from behind or from the flanks, and to prevent their timely arrival on the battlefield. Mobility and carbine will here be of great use to cavalry too.

Of great importance is, lastly, the co-operation of cavalry *in pursuit*. Direct pursuit in front, as will naturally follow from the nature of the fight must, of course, be chiefly left to the infantry and artillery, armed as they are today, because the bullet reaches further and surer than the swiftest charge. But to pursue along the flanks of the enemy is the share of the cavalry, which must try to forestall the hostile march-columns, break into their flanks, and head them off, especially at places where the ground is favorable for causing the delay to the flying enemy. The victory having been bought with streams of blood, the time has now come for reaping the harvest by inflicting on the retreating enemy losses twofold and threefold the amount we have suffered. Fire and cavalry charges where the demoralization of the enemy allows it—must do here equal damage.

The fact that victorious pursuit was never undertaken by cavalry in recent times, at least not in European theaters of war, has led people to think very often that the idea of cavalry pursuit is mere theory, and can never be turned into practice. I do not share this opinion, but think that this fact is simply due to the manner in which cavalry was employed, and to its defective equipment for operative purposes.

During the wars of Frederic's time, when the cavalry fought on the flanks of the infantry and could thus easily have initiated pursuit on the flanks of the enemy, it was tied to the army owing to the system of supply, and was not prepared for independent operations. After battle it was as much exhausted as a rule, as the other arms; and after victory was more concerned with rallying, reorganizing units, and feeding horses, than with pursuing. It rarely happened, therefore, that the enemy was vigorously pursued directly after battle.

In Napoleon's time the armies were organized into smaller units, corps and divisions, and the cavalry was partly apportioned to these units, and partly retained in reserve behind the

battle lines, so as to be able to co-operate with the other two arms along the whole front at the given moment. It was very difficult, as a rule, to start from here a vigorous pursuit along the flanks of the enemy, and it was the more difficult because the generals themselves never contemplated anything of the kind in most cases.

When, afterwards, improved firearms drove the cavalry more and more from the common field of action, nobody thought, as we have seen, of drawing the necessary conclusions from this fact, but everybody stuck to the old notion of battle-cavalry. The cavalry was held back until the final crisis, in positions which afterwards made pursuit as good as impossible; and when the moment arrived to use it, it could not be done, as a rule.

The idea of pursuing with cavalry hardly ever entered the mind of any leader, particularly of modern times; the cavalry, even when it was on the spot, was not launched. I personally met with such a case. At Weissenburg a numerous and fresh cavalry was standing on the Geisberg after its capture; everybody was gazing at the retreating enemy, until, in accordance with the praiseworthy customs of peace, the "Halt" was sounded and the order issued to move into bivouac. There was, therefore, not only no pursuit at all, but all touch with the enemy was completely lost as well. It is further known that at Wörth the Fourth Cavalry Division was even forbidden to move to the battlefield. It was not until evening, when all chances had been lost a long while ago, that it was ordered up, from a long distance in rear, to follow in pursuit; its performance next day was, of course, next to nil.

Of special interest in this respect is, again the employment of cavalry in the battle of St. Quentin. On the right of the battlefield were standing the Guard Rider Regiment and the Seventeenth and Eighteenth Uhlans. Behind the fighting line of the right were distributed, in addition, three squadrons of the Ninth Hussars, seven squadrons of the Third Reserve Cavalry Brigade, the Second Guard Uhlan Regiment, and three squadrons of the Guard Hussars—in all, twenty-nine squadrons. On the extreme left were Dohna's Cavalry Brigade, (Eighth Cuirassiers and Fourteenth Uhlans); behind the left wing were

distributed the Seventh Hussars and three squadrons each of the Fifth and Seventh Uhlans—therefore, again eighteen squadrons. All these units were more or less idle spectators of the action; they played something like the rôle of Mephistopheles' knights in the Imperial Battle ("Faust," Part II). They contributed absolutely nothing to success; for the occasion to charge, for which they were lying in wait, arose for a minute fraction only. For orderly and dispatch duties, as well as for direct reconnaissance on the flanks of the army, were actually needed, perhaps, ten to twelve squadrons. It would have been very easy, therefore, to concentrate on the right a cavalry division of twenty-four squadrons, and on the left a strong brigade of three regiments, and to furnish them with some guns.

If we imagine these horsemen to be equipped with modern firearms, and led in a modern spirit, they might have achieved the most brilliant success. During the battle they could have acted already against the flanks of the hostile army, and vigorously supported the infantry. Much more could have been achieved during the further progress of events. It may be left an open question whether it might not have been possible to delay, on the German left, Pauly's Brigade, marching up from Lempire to the battlefield. But it would have been feasible, without the shadow of a doubt, to cut the French army's line of retreat, and possibly force it to capitulate. For this object it was only necessary to occupy towards evening, when the issue of the battle was no longer doubtful, the crossings over the Canal of St. Quentin, which the French army was obliged to cross. The cavalry on the left would have had only a short ride to Belle Englise, and that on the right about twenty kilometers to Lehaucourt by Homblicres and Remaucourt. On the way it could have occupied with a detachment the bridge of Lesdun; but the French army's main line of retreat could have been effectually barred on the line Belle Englise-Lehaucourt. Nobody, however, thought of employing these horsemen in this fashion—not even a Goeben, the cavalry itself, least of all. At that time it altogether failed to have a clear conception of what it really could do and ought to do. There was only a vague idea of cavalry being a kind of battle

reserve, which could be used only in case of dire necessity. Consequently nothing was done at all.

So long as such views prevail, so long as we always want to keep the cavalry directly in hand, with the object of lying in wait for impossible occasions for charging, instead of using its full fighting power on the flanks and rear of the enemy, and placing it thereby advantageously for pursuit, so long will there be no successful pursuit by cavalry. The cavalry divisions must prepare themselves for such, fully conscious that only then can valuable results be achieved. How can it be done? The tactical preparation and brilliant execution of pursuit after the Battle of Nashville, in December, 1864, in the American War of Secession, is an instructive example of that. It will pay us to study the deeds of this kind of cavalry.

In a future European war we must also carefully prepare for supplying the pursuing cavalry, if it is to push forward boldly. It will be a further advantage if we succeed in beating the opposing cavalry during the battle itself. Should that cavalry show the same natural tendency of acting against the flanks and rear of its enemy, the consequence would necessarily be a cavalry duel, which in all probability would be fought with cold steel, since here, as well as in reconnoitering, both cavalries must aim at deciding matters rapidly. But if one side feels too weak, it will probably have recourse to the firearm so as to at least prevent—if it cannot itself act offensively—the enemy from carrying out his intentions, and thus to bring about an equalization of forces, which gives it perhaps the chance again of resuming the offensive combat with cold steel at a later stage of the fight. In this case must the enemy's resistance be rapidly broken, too. The cavalry must, therefore, always advance early in the day and try to come close to quarters with the hostile cavalry, so as to have its hands free when matters are ripening on the battle field.

The necessity is shown here again of disposing of a numerous and powerful cavalry, able to do its best in a charge or in an attack dismounted, where it should be capable of employing sufficient rifles in action; such cavalry alone will be in a position to pursue vigorously; and on the other hand, such cavalry alone will be able to oppose energetic pursuit with some chances

of success. And it is this last duty which imposes a further task upon cavalry.

When the battle has been fought; when the army which has fought has lost all moral force for further resistance, and retreat has become unavoidable, it will be the duty of cavalry to guard the flanks of the army against any enveloping pursuit.

Whatever losses it may have suffered in the course of the day, whatever checks it may have experienced, at the moment when retreat begins it must re-appear on the battlefield and act offensively, if possible, on the flanks. Nothing will cause greater relief in such moments of moral trepidation than a renewed resolve to attack; nothing will be more apt to nip in the bud any hostile attempts to envelope. But when it is positively impossible to act offensively, the cavalry must make efforts to bar defensively those roads on which the enemy is pursuing parallel to our army. Especially when the pursuing cavalry is trying to use the night for its advance, we must oppose it on all roads and paths with the carbine, and construct hasty barricades, which are best made of wire. In this way a persevering cavalry, aided by cyclists here, too, may save the retreating army heavy loss and demoralization.

It is seen, therefore, that in almost all its spheres of action the importance of cavalry in war has very much increased with the growth of the armies, though its employment somewhat differs from that of former times. But *that* army is sure to derive a great advantage which is firmly resolved to discard antiquated views, and assigns to its properly equipped cavalry those duties which modern arms and military exigencies have imposed on it.

THE CONFEDERATE CAVALRY.*

BY PERCY CROSS STANDING.

1. A SURVIVOR.—COLONEL JOHN S. MOSBY.†

THE octogenarian Colonel John S. Mosby is one of the rapidly-diminishing band of survivors among leading great fighters in the American Civil War. He was, in the judgment of numerous critics and authorities on the opposing side, the most formidable partisan leader of cavalry in the service of the Confederate States in that fratricidal struggle. Colonel Mosby has been so good as to furnish the writer with certain facts concerning his participation in the defence of the Southern Confederacy which have not previously been published. He is himself a writer of grace and charm, having added to the immense literature of the Civil War a fascinating volume entitled, 'With Stuart's Cavalry in the Gettysburg Campaign.' General J. E. B. Stuart was the brilliant and chivalrous commander of the mounted troops of the Confederate 'Army of Northern Virginia,' which met its Waterloo on the field of Gettysburg in 1863. It has been generally accepted that Gettysburg was lost on account of the absence of Stuart's cavalry from the Confederate Army, engaged in an elaborate raid upon the enemy's lines of communication. Colonel Mosby, however, characterises this as 'the Gettysburg legend,' and forcibly adds: 'As I brought the information that induced General Stuart to ask permission to cross the Potomac in rear of the enemy, and was chosen to command the advance of his column, I think I have a right, as an actor in the great tragedy, to be heard.' Stonewall Jackson had been killed a few weeks previously, and Lee's defeat by Meade at Gettysburg was decisive of the fate of the Southern cause.

John S. Mosby first entered the Civil War as a private soldier, but even in that humble capacity his merits were recog-

*From the *British Cavalry Journal* for April, 1912.

†Based on facts communicated to the officer by Colonel Mosby himself.

nized by the Confederate Generalissimo in an Order of the Day. Promotion speedily followed, and the sequel to one of his finest feats of daring, in conducting a raid far within the enemy's lines, was this communication from General Lee to Jefferson Davis, the Confederate President: Mr. President,—You will, I know, be gratified to learn by the enclosed dispatch that the appointment conferred a few days since on Captain Mosby was not unworthily bestowed. The point where he struck the enemy is north of Fairfax Courthouse, near the Potomac, and far within the lines of the enemy. I wish I could receive his appointment as Major, or some official notification of it, that I might announce it to him.—R. E. Lee, General.' The 'enclosed dispatch' was in these flattering terms: 'Captain,—Your telegram announcing your brilliant achievement near Chantilly was duly received and forwarded to General Lee. He exclaimed upon reading it: "Hurrah for Mosby! I wish I had a hundred like him." Heartily wishing you continued success, J. E. B. Stuart, Major-General Commanding.'

And what was the 'brilliant achievement' so brilliantly eulogized by Generals Lee and Stuart? I have thought it well to relate it in the veteran Mosby's own picturesque phraseology: 'It was on March 7, 1863 that I started from Aldie with twenty-nine men. It was pitch-dark before we got near the enemy's cavalry picket at Chantilly. Here a good point was won, for once inside the Union lines we would be mistaken for their own men. We passed along close by the camp-fires, but the sentinels took us for a scouting party of their own cavalry. I had no reputation to lose by failure, but much to gain by success. I remembered, too, the motto that Ixion in Heaven wrote in Minerva's album—"Adventures are to the adventurous." There were a few guards about, but they did not suspect us until they saw a pistol pioned at them. Of course, they surrendered. Some even refused to believe we were Confederates after we told them who we were. Joe Nelson rode up to me with a prisoner who said he belonged to the guard at General Stoughton's Headquarters, and with a party of five or six men I immediately went there. An upper window was raised and a voice called out, "Who is there?" The answer was, "We have a dispatch for General Stoughton." An officer (Lieutenant

Prentiss) came to the front door to get it. I caught hold of his shirt and whispered my name in his ear, and told him to lead me to the General's room. Resistance was useless, and he did so. A light was struck, and before us lay the sleeping general. He quickly raised up in bed and asked what this meant? I said, "General, get up—dress quick—you are a prisoner." "What!" exclaimed the indignant general. "My name is Mosby. Stuart's cavalry are in possession of the place, and Jackson holds Centerville." "Is Fitzhugh Lee here?" "Yes." "Then take me to him—we were classmates." "Very well, but dress quick." My motive in deceiving him as to the amount of our force was to deprive him of all hope of rescue. I turned over my prisoner to Stuart at Culpeper Court House. He was as much delighted by what I had done as I was, and published a General Order announcing it to the cavalry, in which he said it was a feat "unparalleled in the war."

This incident evoked from President Lincoln one of the best of the numerous *mots* attributed to him. With General Stoughton had been captured a number of horses. When Mr. Lincoln heard the news he quaintly remarked, *'Well there won't be any difficulty in making another general, but how am I to replace those horses?'*

Passing over the campaigns of Chancellorsville and Gettysburg, we came to that of 1864, when the blood-drenched country was crying out for peace. Colonel Mosby and his dwindling band of guerilla horsemen ('My command never numbered more than two or three hundred men,' he says in a letter to the present writer) encountered the army of General Phil Sheridan, then operating in and direfully devastating the rich and beautiful Valley of the Shenandoah. As illustrating the drastic methods employed by anti-partisan operators in this war of retaliations and reprisals, I extract the following from General Grant's orders to Sheridan at Winchester, Va.: "If you can possibly spare a division of cavalry, send them through Loudoun County to destroy and carry off the crops, animals, negroes and all men under fifty years of age capable of bearing arms. *In this way you will get rid of many of Mosby's men.* All male citizens under fifty can fitly be held as prisoners of

war, not citizen prisoners. If not already soldiers, they will be made so directly the Rebel Army gets hold of them. Give the enemy no rest. Do all the damage to railroads and crops you can. Carry off stock of all descriptions, and negroes, so as to prevent further planting. If the war is to last another year we want the Shenandoah Valley to remain a barren waste."

It is a matter of familiar history that the ill-starred Valley *did* remain a barren waste, but meanwhile the stories of Mosby's adventurous daring are too numerous for quotation. Once he narrowly missed capturing General Grant himself, and on another occasion he came so close to Washington during one of his incursions—actually within sight of the Capitol—that he cut off a lock of his hair and asked a passer-by to give it to Mr. Lincoln with his compliments (but 'the exchange was never effected'). Wrote one of the Northern Generals: 'Mosby is the devil. There will be no peace till he is killed.' Eventually a price was set on his head, but he vigorously and successfully defended himself from the charge of having followed any but 'regular' methods of irregular warfare. And it is significant of General Lee's high opinion of him that after the capitulation of the Army of Northern Virginia—April, 1865—Colonel Mosby was placed in command of what remained the Force of the Confederacy until the final laying-down of arms, comporting him with dignity and fortitude in what must have been a trying position. Many years afterwards, during Mr. Roosevelt's time as President, the veteran lived to hold office in the United States Department of Justice at Washington.

In his Memoirs, General Phil Sheridan speaks of Mosby's whirl-wind operations in the Shenandoah Valley. He makes no complaint as to the Colonel's methods of conducting war-like operations, but, on the contrary, says, 'He was the most formidable partisan I met in the war'—and this although Sheridan had encountered both Forrest and the celebrated John H. Morgan. Thus commented President Grant after the sword had been finally sheathed: 'Since the close of the war I have come to know Colonel Mosby personally and somewhat intimately. He is a different man entirely from what I had supposed. He is slender, not tall, wiry, and looks as if he could

endure any amount of physical fatigue. He is able, and thoroughly honest and truthful. There were probably but few men in the South who could have commanded successfully a detachment in the rear of an opposing army, and so near the border of hostilities, as long as he did without losing his entire command.'

In his admirable biography of Stonewall Jackson, the late Colonel Henderson has said concerning the work of Mosby and his coadjutors: 'These operations are brilliant examples of the great strategical value of a cavalry which is perfectly independent of the foot-soldier, and which at the same time is in the highest degree mobile. Those who have never had to deal with communications of an army may be unable to realize the effect that may be, and often is, produced by such a force; but no one with the least practical experience of the responsibilities which devolve upon a Commander-in-Chief will venture to abate one jot from the enormous strategical value assigned to it by American soldiers. The horseman of the American Civil War is the model of the efficient cavalryman.'

II. JOHN MORGAN AND HIS 'ROUGH RIDERS.'

There are lessons innumerable for the cavalry officer of today in the meteoric career of General John H. Morgan, of the Confederate States service, who in the American Civil War performed feats of prodigious valor and romantic daring at the head of his corps of irregular horsemen known as 'Morgan's Rough Riders.' These troopers were undoubtedly the best mounted in the Confederate service, every one of their splendid mounts being a thoroughbred Kentucky 'blue grass' animal. And the men who bestrode them matched them, from Morgan's two 'brigadiers,' Colonel Basil Duke and Colonel Adam Johnson, to the humblest bugler in the command.

Morgan's first great feat of arms was performed in the summer of 1862. Entering the State of Kentucky at the head of nine hundred mounted men, he emerged at the close of this his first important 'raid' with no fewer than 2,000, all of them well equipped and finely mounted. In the whole operation he did not lose more than a hundred men, while in prisoners alone he took nearly 1,200. Nevertheless, after Morgan's

return to Tennessee, Kentucky reverted to the Federal power, and in June, 1863, General Morgan was urgently 'sent for' by General Bragg, commander-in-chief of the Confederate 'Army of the West.'

Bragg was confronted in force by the Federal 'Army of the Cumberland,' under Rosecrans. He wanted Morgan to divert attention, and, incidentally, to inflict damage, by means of a fresh foray—but he did *not* want the intrepid cavalryman to penetrate the enemy's lines farther than the city of Louisville, Kentucky. In fact, Bragg positively forbade a crossing of the Ohio River. Now this did not suit John Morgan at all. He told his second in command of his fixed determination to exceed orders by crossing the great river into Ohio, and on July 2d, the raiders started off—a perfectly equipped array of 2,460 horsemen, with two three-inch Parrott guns and two howitzers. They crossed the Cumberland River in fine style, brushing aside with heavy loss a determined attempt to dispute the ford. The enterprise had begun.

At dawn on July 3, 1863, the Rough Riders approached Columbia, stormed it in a wild charge, and made for the Green River. Meanwhile the federal authorities had been telegraphing all over the threatened States, and even as they marched in the night the raiders could hear the noise of the axes felling timber to obstruct their onward progress. It was now July 4 ('Independence Day'), and finding 400 infantry under Colonel Moore blocking his way at Green River, Morgan sent in to demand his 'unconditional surrender.' The colonel had the bad taste not merely to decline to accede to this cool proposition, but to put up so good a fight when Morgan's men proceeded to rush his stockade that ninety of the assailants were placed *hors de combat* inside a quarter of an hour. So the Confederate leader, not relishing this at all, left the enemy where he was and crossed the stream lower down, his next objective being the thriving town of Lebanon. This place was garrisoned by the Twentieth Kentucky Regiment; but Morgan, hearing that this force was by way of being strengthened from outside, attacked at once with the utmost fury. This time his men carried the place, but not before they had lost another fifty killed and wounded—making 140 casualties in two engage-

ments. At Lebanon fell Morgan's brother Tom, a promising young lieutenant in the Second Kentucky. It will be perceived that Kentucky men were fighting on both sides, as, indeed they did throughout the war.

On sped the valiant and dreaded raiders, twenty-one out of every twenty-four hours in the saddle. 'Tapping the telegraph, *i. e.* taking down the telegraph wires in order to mislead the enemy by means of false messages, was a favorite diversion with Morgan. This he did with the utmost success until the Federal authorities became too wary for the ruse to be longer successful. Louisville was already in a panic, since, of course, it could not be known there that Morgan intended merely to threaten and not raid the city. 'So widespread was the effect of the raid of these 2,000 Rough Riders that in the States of Ohio and Indiana 120,000 militiamen took the field against them, in addition to the three brigades of United States cavalry.' On the morning of July 8, or less than six days from the start of his enterprise, Morgan reached the Ohio. He had done more than everything that duty and General Bragg commanded, for three states were utterly demoralized and dumbfounded at the boldness of his wonderful initiative. Not that 'magnificent' was the word applied to it by the Federal foe, for Morgan had to burn on order to render his raid a real devastation, and his men had to plunder in order to exist.

His followers proceeded to cross the Ohio at Brandenburg, with the timely assistance of two steamboats which they 'commandeered.' Suddenly, and while yet a portion of the raiders were on the Kentucky shore and others on the Indiana bank of the mighty river, a hostile gunboat appear in the offing and commenced to shell the crossing. This was a critical moment indeed; but again John Morgan rose to the occasion. By skilled and masterly use of his four small guns he beat off the gunboat, and the crossing proceeded. Next he made for Indianapolis, the capital of Indiana; but he swerved aside so as to leave that city on his left. A running fight went on continuously now, for all the countryside was in an uproar. At a place called Corydon some sixteen of the raiders bit the dust in a very pretty skirmish. Most of their 'blue grass' horses

were long since done for, and every available animal that had any pace in him was 'borrowed' and ridden to death.

He might even have captured the fine city of Cincinnati, for not only was it absolutely within his grasp and defenceless, but he could have utilized any number of ferry steamers on the Ohio. Moreover, it certainly was not because his men as well as his horses were now falling out from sheer fatigue that the bold 'rebel' did *not* occupy the city. It was because, incredible though it may sound, he cherished as even bolder ambition yet!—nothing else than to press right on through Ohio and Pennsylvania, and join hands with the Confederate Generalissimo, R. E. Lee. But what would have been an absolutely unique feat of arms was arrested by the sombre news that reached Morgan at Piketon. The fortress of Vicksburg had fallen, the great battle of Gettysburg had been lost, and Lee was in full retreat. Obviously the only thing to do now was, if possible, to get back across the Ohio with the wreck of his jaded force.

This task proved, however, beyond even his superhuman powers of endurance. There was only one point at which they could recross the Ohio, and this was not reached until the night of July 18th. By that time it was held in force by the enemy, supported by several gunboats which shelled the crossing. It is extraordinary that, with his men starving and almost helpless to sit their horses, Morgan managed to hold out another week. At the ford 125 dead and 700 wounded prisoners were left, and when at last John Morgan gave up his sword to Colonel Way—whose own surrender he had, with characteristic audacity, demanded, but Way was not to be bluffed'—he had only 364 men with him. In twenty-four days the raiders had (a) ridden 1,000 miles through hostile country, (b) won several battles and skirmishes, (c) taken hundreds of prisoners, (d) destroyed *ten million* dollars' worth of Federal property.

Well may the late Colonel Henderson have remarked, in his splendid 'Life of Stonewall Jackson,' that 'the horseman of the Civil War is the model of the efficient cavalryman.'

There was an unkind suggestion at the North to hang or shoot Morgan for alleged dereliction of the rules of civilized war. But he escaped from prison and got back to the Confed-

erate lines—to be shot dead while heroically leading a cavalry brigade at the battle of Knoxville on September 4, 1864. He had the supreme gift of leadership and of winning the confidence and love of those who followed him, *plus* his superlative powers as an exponent of the cavalry arm and its uses in irregular warfare.

THE SERVICE OF RECONNAISSANCE WITH SPECIAL REGARD TO DIVISIONAL CAVALRY.*

BY MAJOR V. CZERCHOW, AUSTRIAN GREAT GENERAL STAFF.

COMPLAINTS over the shortcomings of cavalry in the reconnaissance service, especially in regard to the divisional cavalry, are by no means infrequent. It might be not uninteresting to seek for the cause thereof, because in doing this many a fault can be rectified. I have endeavored to combine the causes into groups, and in doing so may touch points which have, as a matter of fact, been touched on by other lecturers and writers.

1. DUTY. The points and "*feelers*" of the service of reconnaissance are the patrols. While our regulations clearly define the duties of the security patrols, those of the reconnoitering patrols are defined only along general lines. Thus the expression: advance patrol, flank patrol, rear patrol carries in itself the tasks assigned to each, while the frequently occurring expression, "*information patrol*" is not so fortunate. In the sense of our regulations "*information patrol*" means a small body of troopers or infantrymen under a commander, sent out to seek the enemy or reconnoiter the terrain. The duty of the information patrol (expressed by its denomination), frequently supplemented only by designation of the road it is to take, is vague. The patrol can in most cases only perform part of its duties and if nothing more definite is required of it,

*Translated from *Kavalleristische Monatshefte* by M. S. E. Harry Bell, U. S. Army.

it will perform only that part of its task which appears to be most important to its commander. Whether this is agreeable to the intentions of the leader who sent out the patrol is doubtful and at most merely a matter of chance. The dilemma created is the more portentous because in most cases, the patrol being sent out very far, it will be found impossible to regulate its movements from the rear later on. I shall cite a few examples from which it will be apparent how many tasks may be given an information patrol, not mentioning those duties given a battle patrol. These duties I will combine into three groups: (a) seek the enemy; (b) conduct when enemy is found; (c) reconnoitering the terrain.

(a) *To seek the enemy.* For instance, to ascertain whether or not the enemy is in B; whether or not in B, C, or D (of course only a small area); whether or not between A and B; if so, to correctly locate his position; whether the enemy has already reached or passed B; when he passes a definite point; whether from a definite point the enemy can be seen; whether to seek the enemy only in a stated direction; to reconnoiter behind an enemy ascertained to be in a certain locality; to ascertain if the enemy is being followed by additional parts of his army; to reconnoiter to where the enemy reported in B has marched; and in all of these duties ascertain the enemy's line of march, armament, strength, and at what time he reached a certain or definitely known locality, etc.

(b) *Conduct when enemy has been found.* The conduct of information patrols in this case is laid down in paragraph 241, of the regulations. Of course the instructions contained therein are only for general guidance, as everything depends on special conditions in which the different patrols encounter the enemy. Thus at the moment of encounter the first doubts will arise which will influence the conduct of the patrol. As a general rule the question then will be whether it will be more important to continue to observe the assigned line of march or the march objective or to keep an eye on the enemy. What is said next will explain this more clearly.

Shall report be made of having encountered a hostile patrol or not? Should the patrol, observing paragraph 227 of the

regulations, keep in touch with the patrol or shall it seek out the hostile main body, as laid down in paragraph 228? If the patrol received no orders covering this question, it will in the first place depend on the strength of the patrol whether or not risk detaching one of its members to carry a message back. To make a general principle of *not* reporting a hostile patrol is not to be recommended offhand. Should a hostile patrol appear from a direction in which no enemy was supposed to be, that fact may be an indication that stronger forces are following up that patrol. Of great importance also is the encountering of artillery patrols. In any case, sending back a report of having met a hostile patrol is easier than sending back any later reports, which latter will have to reckon with hostile interference. When the march direction of the two opposing main bodies are crossing each other it may happen that the encounter of hostile patrols are the only indications from which direction the enemy may be expected, as has been demonstrated in maneuvers. It is also difficult to form any judgment as to the size of the hostile force sending out a patrol by the size of the patrol encountered; in other words, do we encounter a patrol or a platoon? For instance, should our patrol work for a squadron, the encounter with twenty troopers (possibly three patrols combined) is important, as such a strong number, in an encounter between two opposing squadrons can produce a material effect by timely and (if not reported) surprising interference.

If, on the other hand, our force consists of a division of infantry and the hostile patrol comes from a direction where the enemy is known to be or advancing from, it would be bad policy to fritter away a trooper for sending a message.

In the case mentioned above (twenty troopers encountered, our strength one squadron) it would be dangerous, possibly, to keep touch with that patrol and not continue the march. A division of the patrol, one part keeping touch and the other part continuing the assigned line of march, may be the best solution of the question under these conditions.

The information patrol encounters a squadron: shall it keep in touch with it or continue its march? Only clear positive orders on the subject and proper strength, will enable the patrol commander to arrive at a correct decision. In all other

cases chance and fortune will govern whether or not he arrives at the correct decision. Should our own force consist of only one squadron or but little more, it might be best to keep in touch with the hostile squadron, for a bird in the hand is better than two in the bush. The same holds good when encountering a company of hostile infantry.

Take now the case of the patrol encountering a strong enemy on its line of march, the enemy debouching with one part of its column onto a different route of march. In this case the correct thing would be a division of the patrol; if its strength does not allow that, then only the patrol commander's sagacity and training can decide which part of the enemy's column should be followed up, whether the stronger or weaker part. It may be of more importance to observe the weaker than the stronger part.

A similar case arises of the patrol encounters on its line of march an enemy who is debouching to another direction with his entire force. Should the patrol then proceed along its assigned line of march or should it follow the enemy? What should be done if this enemy is followed by another group retaining its original direction of march along the route the patrol has left?

Observation and discernment of security troops and main body is easy only in open terrain, difficult in covered terrain. If, in the desire to find the hostile main body, we attempt to break through the screen of the security detachments or to go around it, it may easily happen that we get too far to the rear and that it will be impossible, especially should the opponent consist of cavalry, to send word back to our troops in time to be of any use. For instance, if the patrol commander sees on the road a hostile regiment with one battery, formed into advance guard, support and an additional group, that group may be the enemy's main body or only a reserve for the advance guard. Should the patrol commander look for the main body following the formation he sees, it may easily happen, in a difficult terrain, that he loses touch entirely with the enemy. What he sees may also be a flank detachment.

(c) *Reconnoitering the terrain.* In this duty errors are committed in so far as the patrol receiving orders to simul-

taneously reconnoiter enemy and terrain, which can be done only seldom. On the other hand, there is no provision in our regulations compelling the patrol commander to report valuable matters concerning the terrain not noted on the maps or which differ from what is shown on the map and which have come to his notice. This latter especially applies to roads, forests, and good points of overlooking the country.

If the enemy is weak and the terrain is open, two or more of the above cited duties may probably be solved by a small patrol, otherwise not.

If it is against regulations to send out an information patrol without giving it a definite task to perform, it is the more wrong to confound the expression "*information*" patrol with "*battle*" patrol. By combining a task of far reconnaissance with a merely hoped for but not definitely ordered battle reconnaissance the duties of the commander of the whole or of the group commander are transferred to the patrol commander who can, for that purpose, have neither the necessary force in men nor knowledge of the conditions in general. Most complaints of the shortcomings of the cavalry are based on bad battle reconnaissance, which matter is generally overlooked in the orders issued by the commander of the whole.

It is not very easy to draw a sharp dividing line between far and near reconnaissance; this is not necessary, however, for they stand in close relation to each other, in so far as the tactical reconnaissance (battle reconnaissance) springs from and is based on the far reconnaissance. In any case regulations are clear enough in stating that we can not expect the information patrol to furnish the tactical reconnaissance, except in very rare cases. In addition, far more battle reconnaissance patrols than information patrols will be required.

Tasks to be given the battle reconnaissance would be for instance:

Definitely ascertain the grouping for march and strength of the enemy, especially how much he has of artillery; grouping of security detachments; time of arrival of leading elements of the hostile column at definite points in front of our troops; changes in the formation of the enemy's columns; debouchment of single units from the general march direction; number of

trains following the column; observation of the hostile cavalry; shape of battle formations; position of hostile artillery; breadth of hostile battle front; probable gaps in that front; position of the commander; of the reserves and their change of position; affairs of ammunition supply behind the hostile front, etc.

It is clear that when opposed to a comparatively equal enemy these tasks can be solved by a patrol only when the terrain is exceptionably favorable, while one information patrol can ascertain the coming up of a hostile column in any terrain.

In giving instructions to a battle patrol the space of ground in which it is expected to perform its duties should be definitely stated or some part of the enemy's force should be designated for observation. Divisional cavalry can solve the task of battle reconnaissance independently only when its commander is thoroughly instructed as to the entire situation and our intentions and when he still has sufficient patrols at his disposal. Both factors will be found present only in rare cases.

It should not be forgotten that according to paragraph 223, battle reconnaissance is to be carried out by infantry mainly and that not only in a terrain in which cavalry has difficulty in moving but also in absolutely open terrain, where the trooper would offer too prominent a target.

2. *Whose duty it is to send out a patrol.* According to our regulations this may be either the commander of the whole or the group commander, or the chief of staff. Even the patrol commander's immediate commanding officer can send out the patrol, provided the above mentioned officers have authorized him to do so—which is but seldom the case.

When sending out a patrol, the one sending it should be absolutely clear in his own mind what he wants the patrol to do. Practice shows how difficult this is; it takes much training to express a clear and definite will. It is my personal opinion that only he, who has gone through all the difficulties of a patrol commander in his subaltern days, is able to send out a patrol with definite and clear instructions; only such commanders can think themselves in the place of the patrol commander and judge what can be required of a patrol. As infantry officers have not many chances to practice the patrol service, and as the general duties of an infantry patrol are very different from those

of cavalry patrol, cavalry patrols should invariably be sent out by cavalry officers, not infantry officers. This especially applies to the far reconnaissance. For this purpose the cavalry commander should be thoroughly oriented by the commander of the whole as to the situation and intentions and should receive definite instructions as to what is desired—how he gains his ends to be left to his discretion, however.

3. *Strength of a patrol.* The strength of a patrol is not only dependent on how many reports are expected from it but also on the distance it is supposed to cover, as well as the task it has to perform. If the officer who sends out the patrol has carefully considered these points, he can accurately judge what strength the patrol ought to have. Very often he will have to reckon with the fact that the patrol will be divided before returning. I would insert here that it is advisable only in exceedingly favorable terrain to require the patrol to cover much ground when charged with reconnoitering a certain piece of country. As a rule a patrol rides along its road or somewhere where it can overlook that road; of course anything else it sees, falls into the sphere of its usefulness. But when the patrol can not overlook the space of country assigned it from its line of march it has to ride criss-cross, makes no headway and loses much time. It does not help the matter much to send single troopers to commanding heights to observe, for they can be sent only when the distance is very short.

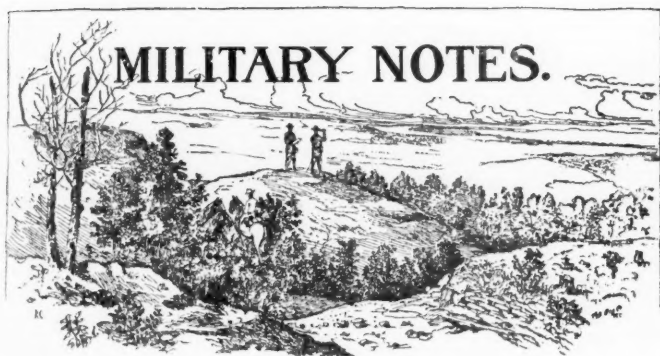
4. *Reports.* No attention is frequently paid to the important matter to whom, to where and when reports are to be sent. Message relay stations, lately inaugurated, better this condition somewhat. It is advisable to charge the patrol commander to send messages at certain times to certain places in addition to unexpected messages he may be forced to send. In case the commander of the whole diverges from the line of march, known to the patrol when leaving the command, all connection between patrol and command is lost. These two points deserve especial consideration.

5. *Limit of time for a patrol to stay out.* Very often the patrol is not instructed how long it has to stay out or how far it is to ride in the designated direction if it does not encounter the enemy. It is hardly practicable to send orders after a patrol

after it once has left the command, for it will be only by the merest chance if the patrol is overtaken. This neglect is bad, especially in our peace maneuvers. Patrols often travel very far away from the command, loose all connection with it, and return in the evening exhausted and starved. In time of peace is advisable to either limit the distance the patrol is to cover or to give it definite instructions at what time it is to cease operations and return to camp.

6. *Screening duty.* This is the duty of the independent cavalry, of the divisional cavalry, and of all security detachments, but at no time the duty of information patrols. The latter may assist in screening by stopping a weaker hostile patrol or patrols, even attack them and make it difficult for them to send back reports. But to charge the information patrol with screening is wrong, because reconnaissance and screening are diametrically opposed. Reconnaissance avoids battle; screening seeks it; screening is a stationary duty, confined to certain defined sectors, while reconnaissance must not be chained down by such commands. On the whole infantry will give better results in screening, when the terrain promises any results in screening at all. Forces utilized, therefore, are not lost, as they can be called back to participate in the battle when necessary.

7. *Training in Peace.* Reasons for failure of cavalry in the field exercises are in part to be found in the short distances separating the contending forces and partly in the limited space giving the patrols in front of the infantry, and partly also in the rapid termination of the exercises. Thus the information patrols have not sufficient time at their disposal to properly observe and report; time also is lacking for the battle reconnaissance to supplement the far reconnaissance. These disadvantages can not be overcome entirely, no matter what corrective measures are taken. The distance between the contending forces has to be kept small; still patrols might be sent out early enough ahead of the infantry to catch the opponent very soon after he has broken camp or even while engaged in doing so.



LONG DISTANCE RIDES OF TWENTY-SEVEN CAVALRY PATROLS.

IN a previous report, an account was given in some detail of the ride of 186 miles in three days executed by officers patrols from twenty-seven different cavalry regiments. This year the performance was repeated with slight modifications. The distance covered was sixty-two miles a day for three days; on the fourth day thirty-one miles were covered in the morning and then at 2 p. m., the same day, all the patrols assembled at the Auteuil race track in the Bois de Boulogne and were reviewed by the President of the Republic accompanied by all the chief military personages of the government and the gentlemen most eminent in racing and horse raising circles.

Each patrol (six men) marched past in line with its officer in front, at a fast gallop, the total distance covered at this gallop being one and one-fourth miles. Four regiments from the German frontier, in garrison at Nancy, Sedan and Luneville, sent out not merely a patrol, but a whole platoon. In all twenty-seven regiments were represented, being all those stationed not over 200 miles from Paris.

I watched these patrols go by and it was altogether extraordinary to see how fresh all the horses and men were. I could observe no trace of fatigue in either, though certainly all must have been severely tried. Most of the horses were going freely against the bit, and the officers mounts especially seemed as keen and alert as if they had made only an ordinary mare.

The last day's march of sixty-two miles was in a furious storm of snow, rain and wind, and the morning of the review, the thirty-one miles were made in a biting wind. The horses were beautifully groomed and the men as clean as if just out of barracks, yet no assistance had been furnished en route. Each patrol had cared for its own horses exactly as in campaign, both on the trip and on the arrival in Paris.

In the evening a banquet was given the officers commanding these patrols at which the Minister of War and the high military and sporting dignitaries of France attended. There was no classification. Each officer received a small gold medal, each man a bronze one, and each regiment a handsome bronze statuette, in commendation of the ride.

These reconnaissances are without doubt of great value in stimulating both officers and men to training and caring for their horses. All mounts were products of the regular remount of the Army and every man had to ride his own horse.

After a day of rest all these patrols were assembled at the Horse Show now in progress and the commemorative medals awarded.

The horses on arrival were all examined by a competent board. The newspapers state that the platoon of the Eighth Dragoons, which marched from Lunéville, shows remarkable condition, not having a man or horse in any way injured or fatigued.

One patrol of the twenty-seven did not finish the ride for some reason; three arrived with one member dropped on the road on account of his horse not being able to go on; all the others reached Paris complete, and it is asserted that all injuries, including sore backs, for the whole lot are of the most insignificant nature.

T. B. M.

SABER vs. PISTOL—A SOLUTION.

THE strange swing of the pendulum of modern cavalry thought in Europe back to the lance, in place of the saber, offers a solution, worthy of careful thought, to the eternal question in our cavalry of saber vs. pistol.

All in the service know our two schools of thought on this subject, our two opinions, each absolutely fixed and sure of the right. As these two opinions can never be reconciled, I believe a solution would be welcomed by both.

Such a solution would seem to be indicated by the coming change in the Russian cavalry, for within a year the front rank of all the cavalry in the Empire will be armed with the lance as well as the saber. This change will of course have a great effect on all the other cavalry of Europe, for the Russians have the greatest numbers and are the only ones with experience in modern war; and since the Russo-Japanese War the greatest changes have been continually taking place in their army, this being the latest.

The consensus of opinion here is that the lance is "par excellence" the arm for the shock action, and that its advantages in this respect far outweigh its disadvantages in the ensuing *melée*; in other words the charge is either successful or not, and for the successful side which smashes its opponent in the charge the ensuing *melée* will be more of a pursuing action. If the Russians can think this way, having, for the possible *melée*, only the saber in reserve, how much more should their opinion be considered by us who have the national weapon, the pistol, to fall back on in case of need. In fact the mere mention of our use of national weapon, in connection with the lance for the shock, produces the most favorable comment.

The possible objection that we might lose some of our mobility as mounted infantry or for dismounted action will hold no weight as can be seen by a study of the new Russian Cavalry Drill Regulations. In these, dismounted action is divided into two classes, "ordinary" and "in force;" the former

to be used under ordinary circumstances when the horses are apt to be moved, and the latter when there is no chance of the horses changing their places. In the first, two men out of three dismount and simply turn their lances over to the third man, the horse holder, who passes his foot through the foot loop and his arm through the arm loop of the lances and swings all three out of the way behind his right shoulder; the same could be done as easily with four. In the second, when one man in six, or in the Cossacks one in twenty-five, is the horse holder, the lances are placed in line on the ground in front of the horses.

Besides being no handicap for dismounted action the use of the lance in place of the saber would solve two vexed questions; one the impediment of the scabbard to the use of the legs on the horse, the other, our lack of all skill in handling the saber. While the fault of the scabbard may be rectified in the new cavalry pack, I see no possible chance of our ever acquiring proficiency in the use of the saber, with our three years enlistment and the time necessarily spent in other work. Furthermore the use of the lance requires no particular skill, it being only necessary to hold it, point it and let the horse do the rest. While these two points may be of minor importance, yet they should enter into the final solution of the question.

It is true that the basis of this paper is the impending change in the Russian Army where the double rank is in use, yet I can see no possible objection to the use of the lance in single rank; and when the time comes, as it surely must, when we adopt the double line formation for mounted action, then with the lance for the shock and the pistol for the hand to hand work, we will be better armed than the European cavalry, and better armed than we now are. To prove this one need only ask the question, as true for 1, for 100, for 1,000 or for 10,000, given equal conditions which will win? The cavalry armed with the saber or pistol alone, that armed with the "saber and pistol," or with the "lance and saber," or that armed with the "lance and pistol? "One answer only would seem possible—the "lance and pistol "

Leaving aside all other questions, when the largest cavalry force in all Europe definitely adopts the lance as the most

suitable weapon for the mounted charge, and this with only the sabre in reserve, I submit that the arming of the American Cavalry with the *Lance and the Pistol* is at least worthy of the most serious consideration.

N. K. AVERILL,
Captain U. S. Cavalry.

THE ARMY HORSE.

THE galloping horse, the thoroughbred, has been developed by careful breeding and by racing trials over a period of more than 150 years. The result is today a horse of quality and substance, superior in certain respects to any equine animal that has ever existed. The Arabs and other Eastern horses are the progenitors of the present thoroughbreds, but as the latter have been a continual improvement in speed and strength on the former, it would not now be wise to consider the Eastern horse as suitable sires for the class of horses required by the army. Few people recognize the fact that the average cavalry horse must be up to carrying 267 pounds, assuming that the man alone weighs 150 pounds. All the light-weight horses, such as standard breds, saddle-breds, Morgans, and even coach horses, owe much to their superiority to the thoroughbred blood of their ancestors. The best type of the thoroughbreds would make superior cavalry horses, but to secure such in large quantities is not possible. For example, *Ultimus* of Mr. Keene is fifteen and three-quarter hands high and weighs 1,240 pounds. He is wonderfully muscled and is in all respects admirably adapted for weight carrying over rough ground for considerable distances at a fast pace. Among the colts at "Castleton," Lexington, Kentucky, were some that weighed 1,000 pounds at sixteen months of age. One of these superbly bred colts weighed 1,040 pounds at that age.

Mr. Thomas Hitchcock has two thoroughbred colts which at three years of age weighed 1,075 pounds and hunted the stiff Meadowbrook country, carrying considerable weight over

the high fences of that section. These same colts made an excellent showing at the Madison Square Garden in the five-foot jumping classes. They have fine loins, quarters and shoulders, also large bones and flat legs, and are extremely level-headed.

These cases are cited to show that the good thoroughbreds (not the weeds) have all the qualifications required for cavalry purposes—weight-carrying capacity, speed and endurance. The prepotency of that blood (above that of all other) and the peculiar fitness of the breed for army ends make such animals highly desirable for sire purposes. Mated with good sized farm mares the results should be fair good cavalry remounts, mated with the heaviest farm mares the results should be fair to good artillery remounts.

It is not intended to suggest that only by such means can we get desired results, but it is believed that there is no other way that would give such quick and consistent results. Good cavalry horses should have at least one-half of their blood strains from galloping stock (thoroughbreds.)

That is fundamental. For horse artillery the same requirement would be wise.

The following letter recently written by Major General Leonard Wood, Chief-of-Staff, tersely sets forth his views regarding this subject:

"Replying to your communication regarding the most suitable horse for cavalry purposes and the best way of breeding such animals, I beg to state that the primary consideration in the cavalry horse is the capacity to carry considerable weight over rough country for a long period and oftentimes at a rapid pace.

"The first condition eliminates a very light horse; the second and third require activity and endurance, and the fourth necessitates some speed. It is clear that certain types must be wholly eliminated and that suitable animals are to be found now in large numbers in very few localities in our country. This fact causes this department to take the keenest interest in the subject of breeding service horses. The temperament of these animals is hardly less important than either of the essential attributes suggested above.

"The principally recognized breeds of this country—standard, Morgan, Hackney, saddle—as is well known, are largely indebted to the thoroughbred ancestry for some of their most noteworthy traits. This fact helps to confirm the opinion that good, big graded mares, almost regardless of predominating strains, when crossed with selected thoroughbred stallions should produce fairly good cavalry horses. Probably the highest type of a charger would result from crossing a large thoroughbred mare, of excellent tempera-

ment and of big bone and muscle, with a stallion of similar qualifications. The Government cannot expect to secure such progeny as that would assure in sufficient numbers. The type of sire, however, crossed with good graded mares should give satisfactory mounts, and in general horses of much farm usefulness. If that policy of breeding were adopted by the farmers in the course of a few years the Government would be able to secure enough young horses of a proper type to satisfy its peace requirements.

"The following gives you a notion of what is now demanded of the service horse owned by officers.

"Suitable mount (charger) as published in General Orders No. 125, War Department, 1908, is hereby interpreted to mean a horse with a minimum height of fifteen hands, two inches, and with a minimum weight of 1,000 pounds. The horse should be of good appearance and of such breeding and substance as will enable him to carry his owner over humps of reasonable stiffness, including hurdles, ditches, fences and other obstacles simulating those which ordinarily would be met in going cross country.

"Thanking you for your patriotic interest in improving the horse of the country, I am, * * *

In general, the ideal hunter, when properly schooled for military purposes should make a superior charger. Such a horse would fully satisfy all purely military requirements and would be good in the show-ring, in the hunting field, at steeple chasing, and possibly at flat racing. In a few words, the officer's charger should be of hunter type not less than half thoroughbred, 1,100 pounds or more in weight, about sixteen hands high (for officer of average height), and above all, level-headed.

Under our new system of remount depots in charge of skilled officers who have time to carefully select young horses, the service is getting better mounts than at any time within recent years; but the horses we are getting are still far from what they should be. If most of our valuable studs be shipped abroad it is clear that instead of an improvement there will be a retrogression during the coming years. That is a phase of the horse question which specially causes anxiety to the War Department.

The War Department is keenly interested in the proposition of the Agricultural Department to have the Congress enact a law whereby superior sires may be placed throughout the country in suitable districts. By this means farmers and breeders will be able to secure the services of high-grade animals at most reasonable rates, and there will be produced over the country young horses valuable for remounts. This policy is

simply carrying out what has been recognized in practically all old countries as a business measure and a necessity. Circulars 178 and 186 of the Department of Agriculture set forth the proposed plan. These circulars are respectively by A. D. Melvin and George M. Rommel, of the Bureau of Animal Industry, and contain information most valuable to all who are interested in this subject.

It is hardly worth while here to contrast the relative efficiency of two mounted commands of equal personnel but of unequal mounts. Other things being equal or nearly so, the cavalry that has the superior mounts (at the same time the conveyance and principle weapon) will easily win out.

If careful selections were made of both sires and dams of thoroughbred animals as regards substance, size, blood lines and temperament, leaving wholly aside the racing question, it is believed that within a reasonably few generations a horse highly useful for practically all cavalry ends would result. It would also be an animal of general utility purposes. This does not ignore the fact that the actual superiority of the thoroughbred has been effected by racing and consequently by eliminating those specimens that were weak from any whatever cause internal or external.

It is an unfortunate fact that the estimate of the thoroughbred by many of our officers has been made from the off-casts of the race track, the weeds that often had neither good conformation nor sufficient substance, and possibly were too nervous to support training.

Cavalry work of the future will more than ever require long, hard service, and at times fast going. Cold-blooded horses are not up to the latter. What is said of the cavalry horse, in a large measure, applies to that of the artillery.

There is a mistaken idea prevalent among officers of cavalry that the big fine hunter types in the hunting field and in the show-ring were primarily expensive animals. This as a rule is not the case, as may be ascertained by actual facts in connection with such horses as Taconite, David Gray, Overall, and many others that can be named.

If officers will purchase big, well formed, young horses, not less than half-bred, they have within their capacity the

making of \$1,500 hunters and if they be specially well trained at the jumps they will have precisely such horses as now seem impossible to many of them.

It will be extremely unfortunate for the service if the officers sets as a standard for his charger the limitations of the average horse of the command he is leading or serving with. Following the principle embodied in that idea, the standard for officers' uniforms, equipment and mental preparation should be radically changed. An officer may, and will often be required to do some specially difficult and arduous piece of riding that would probably never be confided to enlisted men.

Above all, an officer's position and rank demand that his mount be larger and more sightly than that of an enlisted man. That accords with all other elements of his surroundings.

The following statement has been publicly expressed by the Chief of the Staff, who was voicing the views of the Secetary of War:

"Probably the highest type of a war horse would result from crossing a large thoroughbred of inherited excellent temperament and of big bone and muscle with a stallion of similar qualifications. Of course that is the ideal—the standard that would be set, but which, unfortunately, can probably rarely be reached. The crossing of the thoroughbred (either way) just described with any of the breeds just enumerated would also give us fine mounts far in advance of what we now secure."

In the Service Test for chargers at and near Bennings, May 18th, the horses that won first, second and third place were each carrying more than two hundred pounds and each about sixteen hands, one inch high and weighed between 1,125 and 1,200 pounds. The horse that came out first is practically a thoroughbred, the second horse is out of a saddle bred mare sired by a thoroughbred, and the third horse is about three-quarters thoroughbred.

In speaking of this test, the Secretary of War,* who was one of the patrol judges, stated:

"As a test, the ride was invaluable, and a notable success. As a race, it furnished good sport. The test brought out the best in horses and men. It was something of an experiment. Such a test has never been held here

*The Honorable Henry L. Stimson, Secretary of War, is an unusually bold rider to hounds.

before. Every horse was in condition to do better at the finish. *The test developed that big, strong, and well-bred animals are the horses best suited for army use.*"

The above represents the views and policy of the War Department.

By order of the Secretary of War,

LEONARD WOOD,

Major General, Chief of Staff.

A CAVALRY RESERVE.

1. Our militia cavalry forms but a small part of the organized militia of the country, and volunteer cavalry is slow to organize, equip and train after the outbreak of war.

Hence the necessity of listing in time of peace, persons capable with short training of acting as officers of volunteer cavalry during war.

2. The preparation of such lists under the Act of Congress approved January 21, 1903, (G. O. No. 57, W. D. 1909), has been a failure, because the examinations required are either too difficult or too academic for mature men or men of affairs; there is no certainty that persons listed will receive volunteer commissions at the outbreak of war; and in general, there is *no incentive* for the best horsemen of the country to seek to be enrolled in an eligible list of volunteer cavalry officers.

3. This may perhaps be remedied, by *issuing commissions* in time of peace to properly qualified persons as officers in the Cavalry Reserve Corps; accepting well-know horsemen who are graduates of recognized universities and colleges with a physical examination only; and prescribing for those horsemen who lack such diplomas, the examinations required by General Orders Number 57, War Department, 1909.

4. The main incentive will be the issuing of commissions, and it is believed that, considering the favorable results following the organization of a Medical Reserve Corps with its

hundreds of distinguished members on active duty, it will embrace men of education and standing among the hunt-clubs, polo-clubs, riding-clubs and individual horsemen in general throughout the country.

5. Such a body of horsemen, though lacking technical knowledge of military drill and tactics, will insure for the cavalry a body of horsemen who in time of peace will be a powerful factor towards improving and building up its organization; and in war, will give a list of men in affairs, accustomed to handling men, who will be available as officers of volunteer cavalry.

6. Legislation is needed which will bring about the desired results, if practicable without extra cost to the government.

As *horsemanship* is the controlling factor, such legislation, need not and should not apply to the other arms of the mobile army, as horsemanship is of small importance to the infantry; and to the field artillery, technical knowledge of the gun far overshadows the importance of horsemanship.

The outline of a resolution for the action of Congress is appended.

Based on this Resolution, regulations should be formulated prescribing the qualifications necessary for appointment in the *Cavalry Reserve Corps*, one of which it is believed should be ownership of a charger coming up to War Department specifications.

C. D. RHODES,

Captain Fifteenth Cavalry.

AN ACT TO INCREASE THE EFFICIENCY OF THE CAVALRY OF THE
UNITED STATES ARMY.

*Be it enacted by the Senate and House of Representatives of the
United States of America in Congress assembled.*

That from and after the approval of this act, the cavalry of the United States Army shall consist of the regiments now authorized by law, and a Cavalry Reserve Corps as hereinafter provided.

SEC. 2. That for the purpose of securing a reserve corps of cavalry officers available for military service in the regular or volunteer forces, the President of the United States is authorized to issue commissions as first or second lieutenants to qualified horsemen, citizens of the United States, who are graduates of recognized universities or colleges and who shall be found physically and morally qualified for appointment; or who, lacking diplomas from such recognized universities or colleges, shall, after examination prescribed by the Secretary of War, be found physically, morally and mentally qualified to hold such commissions, the persons so commissioned to constitute and be known as the Cavalry Reserve Corps.

The commissions so given shall confer the holders all the authority, rights and privileges of commissioned officers of the like grade in the cavalry of the United States Army except promotion, but only when called into active duty as herein-after provided, and during the period of such active duty.

Officers of the Cavalry Reserve Corps shall have rank in said corps according to date of their commissions therein, and when employed on active duty as hereinafter provided, shall rank next below all other officers of like grade in the United States Army.

SEC. 3. That in emergencies the Secretary of War may order officers of the Cavalry Reserve Corps to active duty in the service of the United States in such numbers as the public interests may require, and may relieve them from such duty when their services are no longer necessary; *Provided*, That nothing in this Act shall be construed as authorizing an officer of the Cavalry Reserve Corps to be ordered upon active duty as herein provided, who is unwilling to accept such service, nor to prohibit an officer of the Cavalry Reserve Corps designated for active duty from service with the militia or with the volunteer troops of the United States, or in the services of the United States in any other capacity; *And provided further*, That any officer of the Cavalry Reserve Corps who is subject to call and who shall be ordered upon active duty as herein provided, and who shall be unwilling and refuse to accept such service, shall forfeit his commission; *And provided further*, That the President is authorized to honorably discharge from

the Cavalry Reserve Corps any officer thereof whose services are no longer required.

SEC. 4. That officers of the Cavalry Reserve Corps when called upon active duty in the service of the United States as herein provided, shall be subject to the laws, regulations and orders for the government of the Regular Army, and during the period of such service shall be entitled to the pay and allowances of like grades in the Regular Cavalry, with increase for length of service now allowed by law, said increase to be computed only for time of active duty: *Provided*, That no officer of the Cavalry Reserve Corps shall be entitled to retirement or retirement pay, nor shall be entitled to pension, except for physical disability incurred in line of duty while on active duty.

SEC. 5. That in the organization of United States volunteer cavalry, officers of the Cavalry Reserve Corps shall receive preference in appointments to all grades including captain, first lieutenant and second lieutenant, under such regulations as may be prescribed by the Secretary of War.

SEC. 6. That all Acts and parts of Acts in conflict with the provisions of this Act are hereby revoked.





**Protection
in War:***

This work covers what is commonly called in this country "The Service of Security," but the author handles it on a large scale. The subject is viewed rather from the point of view of an army commander than of a detachment commander.

The author's views in regard to the handling of cavalry are of interest to cavalry officers. He describes in detail the manner in which the Germans contemplate using masses of independent cavalry in front of their armies. He calls this "the independent cavalry doctrine" and mentions General Von Bernhardt as its chief exponent. In regard to it he says (p. 82): "The doctrine is essentially German in its origin and its application to that army is possibly justified by the numerical superiority and high efficiency of its cavalry. It cannot, however, be accepted blindly by other armies, which do not possess these advantages." He comments on the cavalry duel which would probably result from an application of the German ideas, as follows: "The superior cavalry will gain much for its side by its victory. If we are sure of gaining the day in such a separate application of force, and the enemy is weak enough to give us the opportunity, we would be foolish not to

*PROTECTION IN WAR. By Major General F. J. AYLMER, V. C., C. B. Hugh Rees, London.

avail ourselves of it. * * * * * If the chances in a preliminary cavalry duel are not very distinctly in our favor, we make a mistake in entrusting to our cavalry a part of the whole result which is out of proportion to the importance of the separate force engaged. The defeat of our cavalry does not only mean the loss of so many men and horses, but it lowers the morale of the command in every grade, and decreases the value of our forces for subsequent use.

There is an evident anxiety on this point in the minds of many advocates of the independent cavalry doctrine, and expedients are suggested for minimizing the risks involved. Perhaps this is particularly noticeable in the case of the French, who may have to contend against a cavalry which is at any rate superior in numbers. Cyclist detachments, bodies of infantry carried in wagons or motors, or made extremely mobile by lightening the loads carried on the men's backs, and the celebrated *detachments mixtes* of the latest French school, are all suggested as methods of stiffening the cavalry mass."

There is also noticeable in the pages of General Aylmer's work a painful consciousness of the British inferiority in cavalry and he too has an expedient to offer. He recommends a "General Advanced Guard" composed of a division or corps of infantry with its complement of artillery and with all the cavalry that can be spared after providing for the security of the main body of the army. This "General Advanced Guard" is to operate from one to three or four days marches in front of the army. The cavalry commander is to be always subordinate to the commander of the "General Advanced Guard." The only distinction apparent between this "General Advanced Guard" and the ordinary conception of a body of independent cavalry with an infantry support is that it is given less latitude. It is made strong enough and kept close enough to the main body of the army to prevent its being destroyed before it can be supported. An action in which it becomes engaged is to be merged in the general conflict between the opposing armies.

The "General Advanced Guard" is to constitute a "Reconnaissance in Force," to ascertain the enemy's strength and dispositions and to gain the time and space necessary to enable the main body of the army to maneuver.

General Aylmer mentions the facts that the Japanese armies, although deficient in cavalry, did not make use of such a "General Advanced Guard" as he proposes; also that there is danger that the "General Advanced Guard" may be caught between two strong hostile columns and crushed. His replies to these objections are interesting if not convincing. The disadvantage of a "General Advanced Guard" of all arms appears to be that it would be lacking in mobility; it could reconnoiter only in one direction and it could not decline combat when in the presence of superior hostile forces as a body of independent cavalry could do.

Tripoli.* This is a small book, seven and one-half by five inches—of 118 pages which gives narratives of the principal engagements of the Italian-Turkish War in Tripoli from October 23, 1911, to June 15, 1912.

Accounts are given of twelve engagements, some of which were mere skirmishes, generally being attacks of the outposts of Tripoli by the Turks and Arabs, with few losses on either side, while others were more serious as to losses but none of them rose to the dignity of a battle either as regards the numbers engaged or the casualties. However, there were several desperate fights and in some instances there were hand-to-hand conflicts where the bayonet, saber, clubbed muskets, hand grenades and even stones were used with good effect.

Inasmuch as this is the first, so-called, war in which several modern inventions, such as the aeroplane, searchlights, wireless telegraphy, motor cars and dirigibles have been used in the field in war, it is but natural to presume that much attention would be given them in a work of this kind. However, the use of the aeroplane is noted only four times and then but briefly; the employment of searchlights is mentioned six times and more in detail; while mention is made of the dirigibles but twice.

*"TRIPOLI." A narrative of the principal engagements of the Italian-Turkish War, during the period from October 23, 1911, to June 15, 1912. By Lieutenant Colonel G. Ramaciotti, Commanding First Battalion, Second Australian Infantry. Hugh Rees, Ltd. London. Price, 2 s. 6 d.

On one of these occasions it is said that: "In this phase of the action the dirigible P 3 dropped bombs on the retiring Turks." Nothing is said as to the effect of the dropping of these bombs. It is reported that motor cars were used satisfactorily for delivering ammunition and supplies and in removing the wounded.

It is stated in this book that the Italian officers were armed with rifles and that "*War Dogs*" were employed on the line of outposts or outside of the line of entanglements of some of the out-works.

**On War
of
To-day.***

A new book by von Bernhardi. This is gratifying news to everyone interested in the cavalry service. But although his latest book contains a great deal of interesting matter relative to cavalry, it is not exclusively a treatise on cavalry. It is, as might be inferred from the name, written from the point of view of the immortal Clausewitz. The author points out that Clausewitz never completed the great work which he undertook. It may be doubted if it can ever be really completed so long as war continues to present changes in its external forms. While war remains the same in its essential characteristics, the methods of carrying it on differ from one epoch to another on account of changes of conditions which von Bernhardi discusses in a lucid and interesting way in this work. It is a worthy continuation of the work of Clausewitz and contains moreover a singularly frank description of European international politics and an able forecast of the changes which must be made even in the methods now contemplated of marching, maneuvering and supplying the immense armies which European nations will put in the field in the event of war.

The author claims that the importance and value of cavalry have increased with recent changes of conditions, but he believes that its chief rôle is in its independent employment for

"ON WAR OF TO-DAY." By General Frederick von Bernhardi, General of Cavalry, Retired. Authorized translation by Karl von Donat. Vol. I. Principles and Elements of Modern War. Volume II to follow this fall. Hugh Rees, Ltd. London. Price, nine shillings net per volume.

the purpose of gaining strategic advantages, rather than in its employment on the battle-field. The cavalry should be employed on the flank or in rear of the hostile army and should come up in time for battle as did Stuart at Gettysburg. The disadvantages of loss of communication with the cavalry which were felt by Lee in that campaign will no longer exist because the cavalry will be able to maintain its communication with its own army by means of motor cyclists and wireless telegraphy.

An idea of the contents of the book may be gained from the chapter headings. They are: The Secret of Modern War; Constancy in War; Experience of War and Speculation; Armies of Masses, Forces and Numbers; The Modern Arms and Means of Defence; Technical Appliances in Warfare; The Importance of Cavalry; March Technics; Supplies and Lines of Communication; Methodics in moving Armies; Self-reliance; Method and Command: The Importance of Permanent Defences; The Means of Naval Warfare.

The translation is by Karl von Donat and is literal rather than liberal, but is clear and precise.

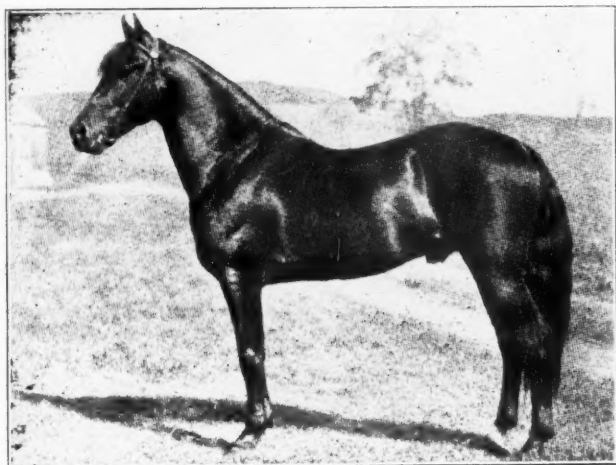


+		Editor's Table.		+
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WHAT HORSE FOR THE CAVALRY?

Regarding the book under the above title, Major F. A. Boutelle, U. S. Army, Retired, writes as follows:

"Mr. Spencer Borden's book, 'What Horse For the Cavalry,' is believed by the writer to be the most valuable con-



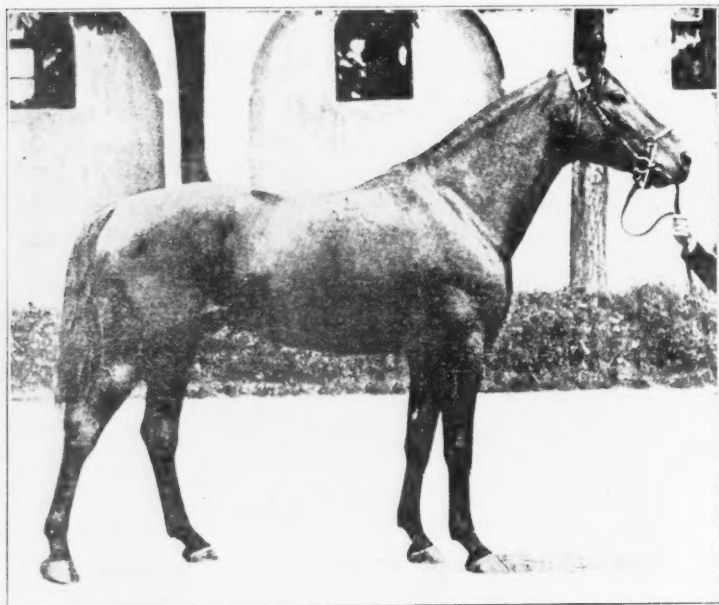
DONALD.
Morgan (America). First prize Vermont State Fair, 1910.

tribution to the cavalry horse literature of the day and perhaps of any day.

"Mr. Borden has had unusual opportunities and has seen the best horses for service of the world, with what would appear

to be the eyes of a seasoned campaigner. If he has not seen service, the army has missed a very valuable officer. It is hoped that he and others will continue the good work until the legs are written off the 'so-called' suitable horse for cavalry service which we have so often seen described."

Before receiving the above from Major Boutelle, permission had been granted for the reproduction in the CAVALRY



A Typical Nonlus Stallion at Mezohegyes.

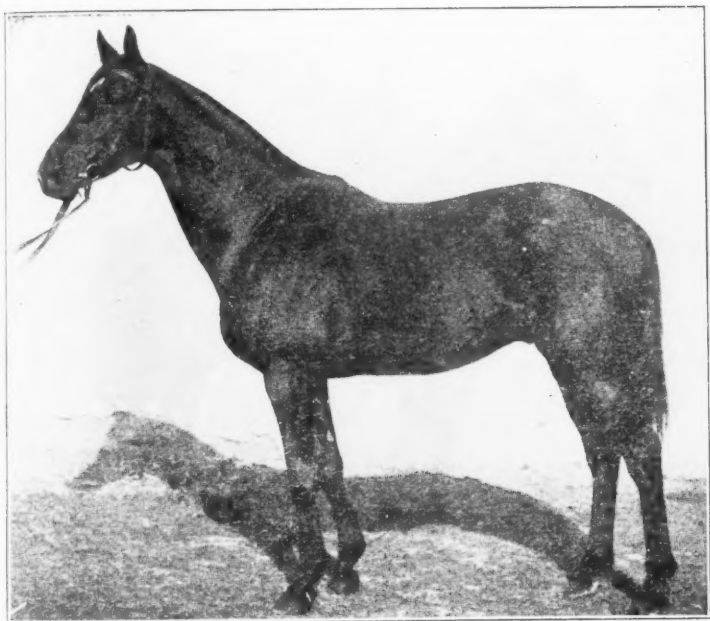
JOURNAL a few of the many illustrations contained in his book and to publish extracts from his work.

In the preface he says: "They tell us that the United States possesses more horses than any country in the world excepting Russia. The figures given are 24,016,024 horses in 1910, as against 21,625,800 in 1900, an increase of eleven and one-half per cent.

"Mr. Rommel, Chief of the Animal Industry Division of the U. S. Department of Agriculture, writing for the JOURNAL

of the U. S. Cavalry Association for November, 1911, analyses these census figures in a manner to prove that these great number of horses do not represent animals available for the Army."

He then goes to show that not one in seventy-five of the licensed stallions in the States mentioned could, by any stretch of the imagination, be considered a probable sire of a cavalry horse.



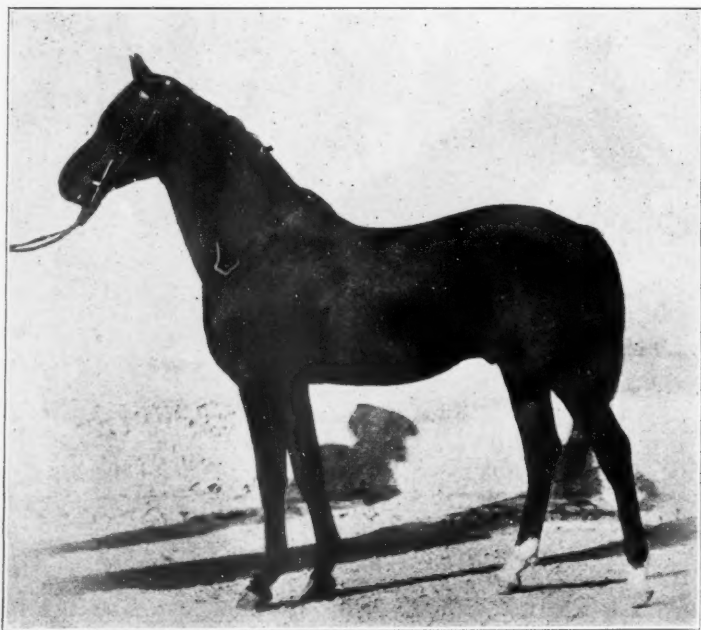
SLIEVE CALLION.
Of the Kisber Stud of Hungary.

He also says in the preface: "A horse cannot be bred and reared and trained in less than six years, one while the mare carries him, three while he grows to an age where his training can begin and two for him to mature and complete his education. We cannot go 'shopping' for horses because we have plenty of money.

"Now, a supply of horses cannot be met by any off hand

act of the will. We cannot say 'Let there be horses!' and horses appear.

"It is time Americans were wakened to the true conditions. With facilities and resources at our command this country should never have to seek a horse supply for its army outside its own borders, as would be necessary in case of war within the next ten years."



YOUNG O-BEYAN.

A pure Arab of the Hungarian Government Stud at Babolna.

He then goes on to state that nearly all European nations have some scheme of government encouragement for horse breeding to insure a good supply of horses for the use of their armies. He also describes the several great studs that he visited in Europe, he having been given unusual facilities for inspecting them on account of the letters he carried from the high officials of this country.

Speaking of the custom of docking the tails of the horses, after having extolled Kaiser Wilhelm II of Germany for his good qualities, he says:

"Nevertheless, Kaiser Wilhelm the II has allowed himself—also his father, Kaiser Frederick—to be mounted on a horse with a docked tail, on the bronze statue at the end of the great bridge over the Rhine at Cologne. This is shocking as a matter of taste and probably unprecedented in all plastic art. The writer knows of no other example.

"Who would ever think of Napoleon, or Frederick the Great, or Alexander, or Wellington, or George Washington, riding a horse with the tail of a rabbit. In our own day, try to picture Lord Roberts or Kitchener on a bob-tailed horse. However, *chacun a son gout!*

"But one cannot fail to be reminded of our own General Phil Sheridan, one of the greatest cavalrymen of all history. It is said that as he lay dying at his home in Washington, his brother came to see him one morning. Colonel Sheridan asked if there was anything he could do for the General. He replied: 'Yes, Mike, make me a promise.' 'Whatever you ask, Phil, I will try and do as you wish.' 'Well, Mike' and the weary eyes wandered out of the window and rested upon a bronze equestrian statue outside, 'Mike! When I am dead, if they put me on a horse, for God's sake see that it is a better one than that.'

PROMOTION AND ORGANIZATION.

The attention of our members is particularly called to the valuable contribution in this number of the JOURNAL by Captain Moseley on the subject of "The Relation of Promotion to Organization." Coming, as it does, from the cavalry representative on the Committee of the General Staff that has had in charge, for a year or more, of the preparation of a scheme of organization for our mobile army, it should receive the earnest attention of our cavalry officers.

Regarding the paragraph which Captain Moseley quotes from the July number of this JOURNAL, and which he criticises as giving a wrong impression, the Editor alone is responsible for the language used, and in fact, for the whole editorial from which this extract is taken. However, a re-reading of the paragraph in question, in connection with the entire editorial, will show, it is believed, that the article is along the lines of previous ones on the question of "One List for Promotion," and which have had the hearty approval of the Executive Council of the Cavalry Association as well as of all cavalry officers with whom the matter has been discussed. It is possible that the objectionable part of the paragraph quoted is contained in the sentence which reads as follows: "Rumor has it that this long delay in submitting this report has been caused by a failure to reach an agreement as to how the resulting promotion that would follow the reorganization should be apportioned." Judging from Captain Moseley's article this rumor was not correct but at the same time that opinion had been expressed by several cavalry officers on many occasions.

However, to discuss the report of the committee the leading portions of which, as far as relates to the subject of promotion, have been published in the service periodicals, it is believed that the conclusions arrived at and recommended for the equalizing of promotion, whenever an increase or decrease is made in any arm of the mobile army, is correct and in accordance with the principle enunciated in the May, 1912, number of the CAVALRY JOURNAL, which is as follows:

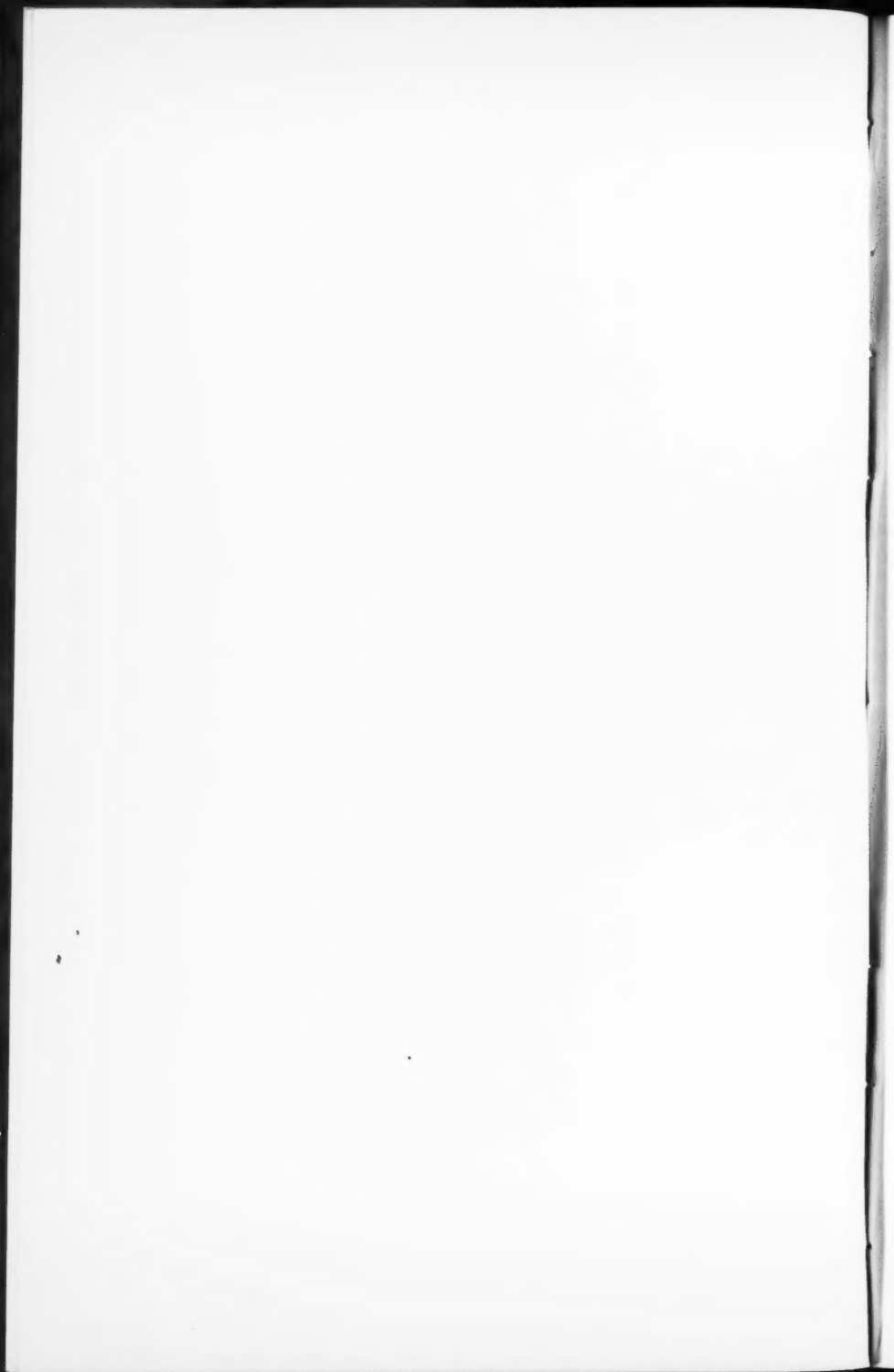
"The acceptance of the principle that the increase or decrease of the number of officers in any arm shall be borne by all the arms, in all grades, share and share alike, officers thus transferred to another branch to rank in the branch to which transferred as they would have ranked therein had they been originally commissioned in the branch to which transferred."

At the same time it would be of interest to know how this committee arrived at the conclusion that "the practical application of the straight one list principle was found to present difficulties impossible to overcome with justice to all concerned." What are these difficulties and how can the acceptance of this principle do any injustice to any officer?

However, in the opinion of your Editor, this report does not go to the root of the evil of the inequalities of promotion in the army, although it may possibly cure some of the defects of the present system of promotion as regards the mobile army. It will still allow one officer who has through luck gained a grade over a brother officer to take precedence over him although the former may be his junior by years. There are many officers now in the service who are still captains while their classmates are majors and this rule of promotion will not prevent this happening again in the future although probably not to so great an extent as under the old system.

On the whole, this plan is a step in the right direction but it fails by a long way in curing the evils of inequalities of promotion as illustrated in the comments on the proposed rules for relative rank and promotion, page 244.





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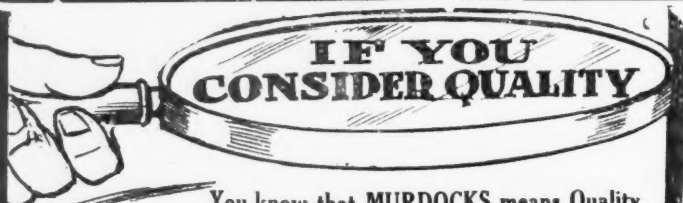
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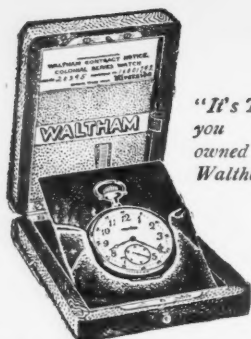
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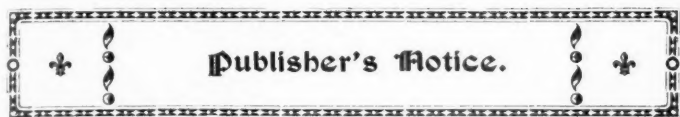
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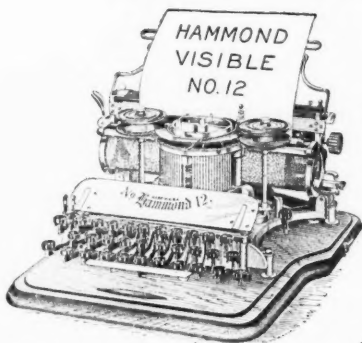
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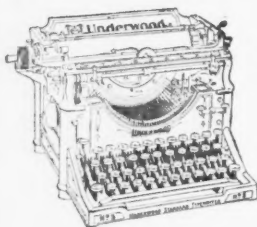
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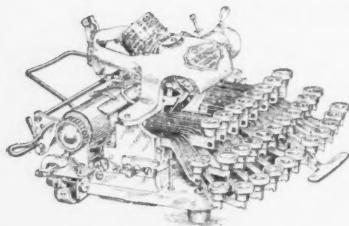
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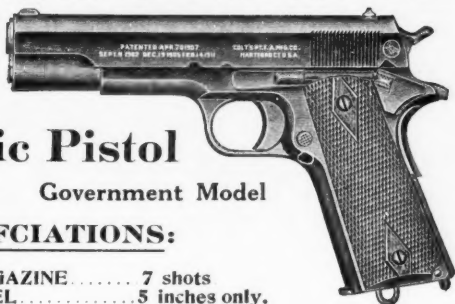
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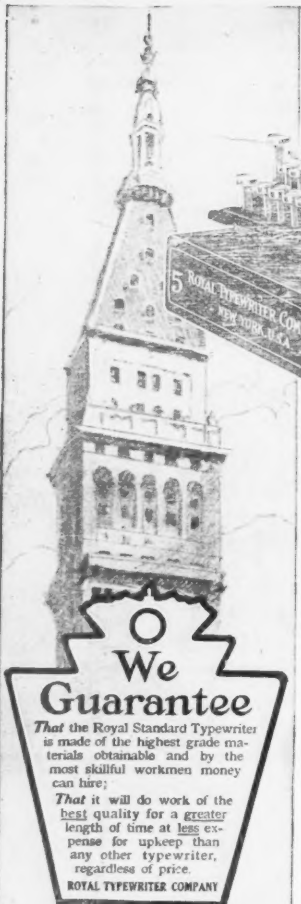
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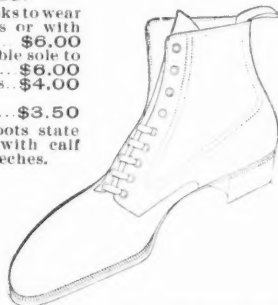
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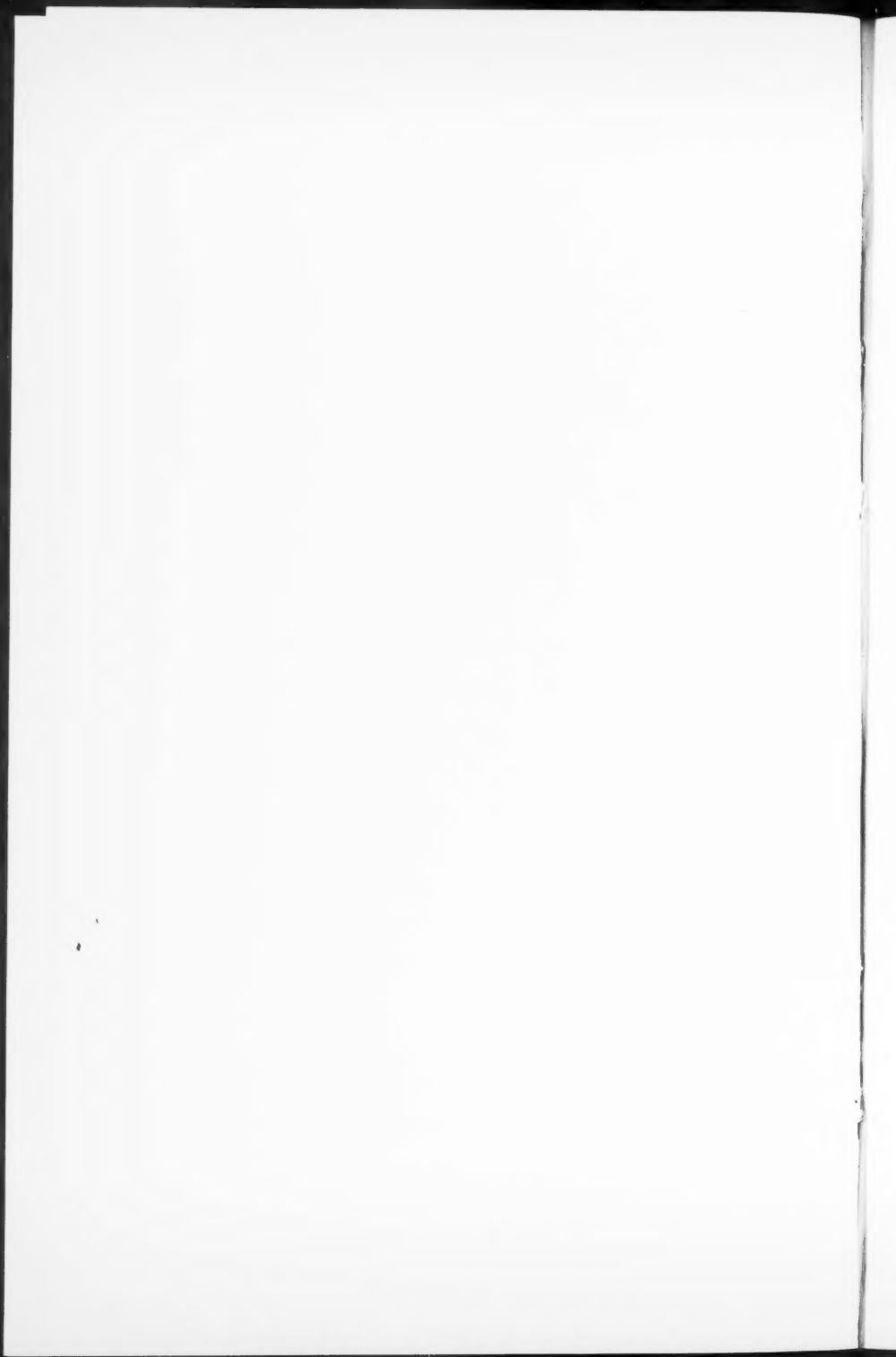
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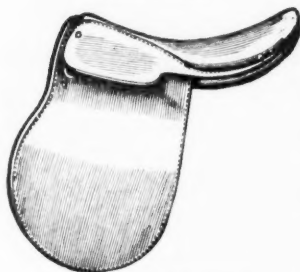
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